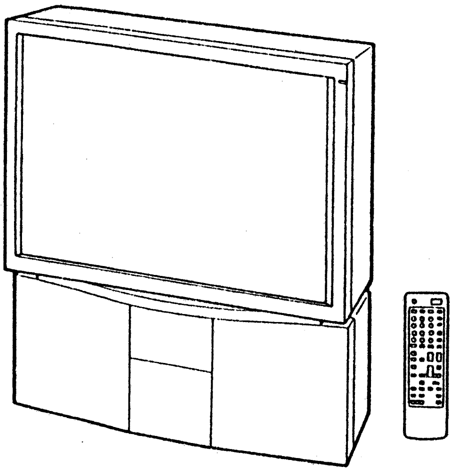
KP-S4613
RM-832

SERVICE MANUAL

AEP Model
Chassis No. SCC-F39A-A



AP-2 CHASSIS

MODELS OF THE SAME SERIES	
KP-S4613	

SPECIFICATIONS

Television system	B/G/H, D/K, L, I
Colour system	PAL/SECAM and NTSC 3.58/NTSC 4.43 (VIDEO IN)
Channel coverage	See page 2 "Receivable channels and channel displays" at the bottom.
Projected picture size	116 cm (46 inches)
Terminals	
Rear	-⊙1 21-pin Euro connector (CENELEC standard) inputs for audio and video signals - inputs for RGB - outputs of TV video and audio signals ⊙→2/ -Ⓢ 2 21-pin Euro connector - inputs for audio and video signals - inputs for S-video - outputs for audio and video signals(selectable) ⊙→ 4/ -Ⓢ 4 21-pin Euro connector - inputs for audio and video signals - inputs for S-video - outputs for audio and video signals (monitor out) -Ⓢ 2, -Ⓢ 4 S-video inputs - 4 pin DIN -⊙ Audio inputs (L, R) - phono jacks Ⓢ→ S-video output 4-pin DIN ⊙→ Audio outputs - phono jacks ⊙→ Audio outputs (variable)-phono jacks External speaker terminals: 2-pin DIN
Front	-⊙ 3 video input - phono jack -⊙ Audio inputs - phono jacks -Ⓢ 3 S-video input - 4-pin DIN ΩHeadphone jack: stereo minijack
Sound output	2 × 30W
Power consumption	220 Wh
Dimensions (W × H × D) (incl. Speakers)	1103.9 × 1289.1 × 511.8 mm
Mass (incl. speakers)	83 kg
Other features	Digital comb filter (High resolution) PIP (Picture-in-picture)

Design and specifications are subject to change without notice.

COLOR REAR VIDEO PROJECTOR

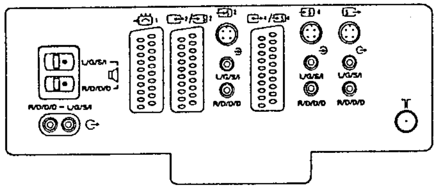
SONY®

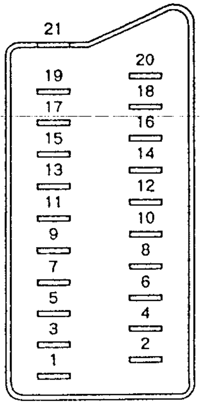
MICROFILM

Receivable Channels and Channel Displays

	Receivable channels	Indication on the screen
PAL B/G/H	E2..12 21..69	C02 C03 C04..C12 C21..C69
CABLE TV (1)	S1..41	S01 S02..S41
CABLE TV (2)	S01..S05 M1..M10 U1..U10	S42..S46 S01..S10 S11..S20
ITALIA	A B C D E F G H H1 H2 21..69	C11..C69
SECAM D/K	R01..R12 R21..R60	C02..C12 C21..C60
SECAM L	F2..F10 F21..F69	C01..C12 C21..C69
PAL I	B21..B68	C21..C68

21 pin connector (⊖, ⊖2, ⊖4)





Pin No.	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standaro level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue input	0.7V ± 3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5 – 12V): Part mode Low state (0 – 2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V ± 3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (branking)	
15	○	–	Red input	0.7V ± 3dB, 75ohms, positive
	–	○	(S signal) croma input	0.3V ± 3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1 – 3V) Low state (0 – 0.4V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
20	○	–	Video input	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
	–	○	Video Input/Y (S signal)	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open) * at 20Hz – 20kHz

4 pin connector (⊖S)

Pin No.	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB, 75ohms, positive Sync: 0.3V [illegible] dB
4	C (S signal) input	0.3V ± 3dB, 75ohms, positive

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

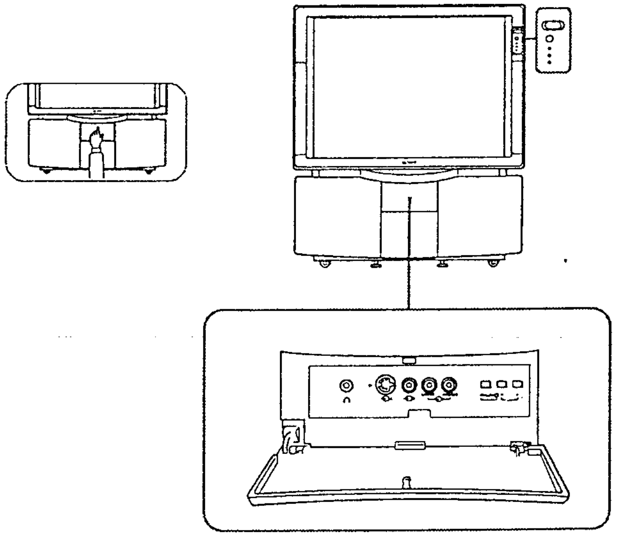
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

SECTION 1
GENERAL

1-1. OVERVIEW

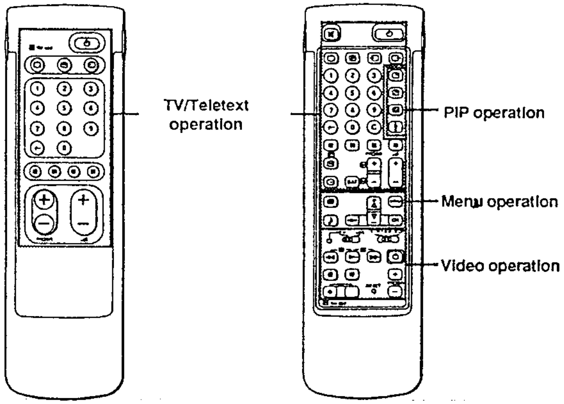
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set-front



Symbol	Name	Refer to page
⏻	Main power switch	14
⏻	Standby indicator	14
A-ꝏ-B	Stereo A/B indicators	16
∩	Headphones jack	22
-Ⓢ 3, -⊃ 3, -⊙ 3,	Input jacks (S video/video/audio)	22
P→⊿→⊃	Function selector (Programme/volume/input)	15
–/+	Adjustment buttons for function selector	15

Remote commander



Note
The SAT button does not operate with this TV.

Simple side

Full-Function side

TV/Teletext operation

Symbol	Name	Refer to page
⊄	Mute on/off button	15
⏻	Standby button	14
○	TV power on/TV mode selector button	14
⊜	Teletext button	15
-⊃	Input mode selector	15
⊂→	Output mode selector	23
1,2,3,4,5,6, 7,8,9,and 0	Number buttons	14
-/--	Double-digit entering button	14
C	Direct channel entering button	11
⊿+/–	Volume control button	14
PROGR+/–	Programme selectors	14
⊡⊡	Teletext page access buttons	19
●	Picture adjustment button	16
♪	Sound adjustment button	16
⊕	On-screen display button	15
⊛	Teletext hold button	19
◎	Time display button	15
■■■■	Fastext buttons	19

PIP (Picture-In-picture) operation

Symbol	Name	Refer to page
◔	PIP on/off button	18
↑	PIP source selector	18
⊙	Swap button	18
⊚	PIP position changing button	18

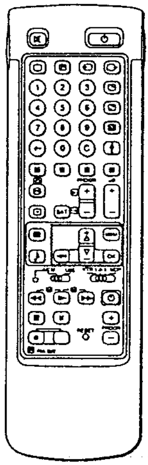
Menu operation

Symbol	Name	Refer to page
MENU	Menu on/off button	8
△+/▽–	Select buttons	8
OK	OK(confirming)button	8
←	Back button	8

Video operation

Symbol	Name	Refer to page
MEM USE	MEM/USE selector	25
MEM	MEM indicator	25
VTR1/2/3, MDP	Video equipment selector	24
◀◀ ▶ ▶▶ ■ II ● ⏻ PROGR +/–	Video equipment operation buttons	24
RESET	RESET button	25

1-2. ADJUSTING COLOUR REGISTRATION (CONVERGANCE)



Once you have set up the TV, you can choose the language of the menu. Then you should converge the three colour layers (red, green, and blue).

Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote commander. They are shaded in the illustration at the left.

❶ Display the Menu

1 Depress ⊙ on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press ◯ or a number button on the Remote Commander.

2 Press MENU.
The main menu appears. (See Fig. 1)

MENU

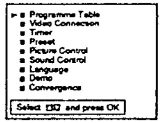

► ■ Programme Table
■ Video Connection
■ Timer
■ Preset
■ Picture Control
■ Sound Control
■ Language
■ Demo
■ Convergence
Select ◻◻ and press OK

Fig. 1

❷ Choose a language

1 Select "Language" with the Δ+ or ∇− button and press the OK button.
The LANGUAGE menu appears (See Fig. 2)

2 Select the language you want with Δ + or ∇ − and press OK.

3 Press ⇽ to return to the main menu.

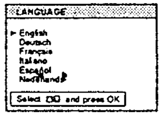

LANGUAGE
► English
Deutsch
Français
Italiano
Español
Nederlands
Select ◻◻ and press OK

Fig. 2

❸ Converge the red, green, and blue lines

1 Select "Convergence" with Δ + or ∇− and press OK.
The convergence menu appears. (See Fig. 3)

2 Select "the line" you want to adjust with Δ+ or ∇−.
Key to line adjustment symbols:
ǀ (red vertical – left/right adjustment)
– (red horizontal – up/down adjustment)
ǀ (blue vertical – left/right adjustment)
– (blue horizontal – up/down adjustment)

3 Press OK.
The line to adjust is selected.

4 PressΔ+ or ∇− to converge the selected line with the centre green line and press OK.

To move up (horizontal line) To move right (vertical line)	Press Δ+
To move down (horizontal line) To move left (vertical line)	Press ∇−

5 Repeat steps 2-4 to adjust the other lines, until all the lines have overlapped to form a white cross. (See Fig. 4.)

6 Press MENU to return to TV picture.

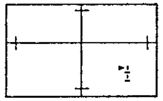


Fig. 3

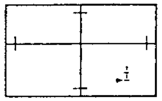
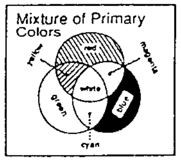
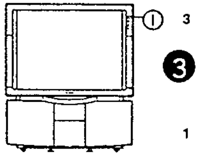


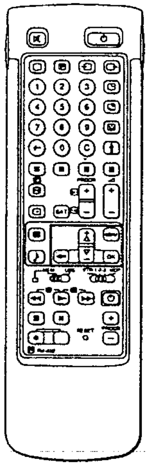
Fig. 4


Mixture of Primary Colors
yellow
red
magenta
green
white
blue
cyan

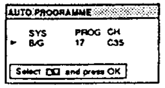


Note on the DEMO function
If you choose DEMO on the main menu, you can see a sequential demonstration of the menu functions.

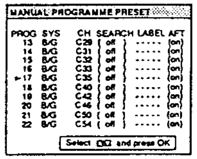
1-3. TUNING IN TO TV STATIONS



You can preset the channels (up to 100 channels) by choosing either the automatic or manual method.
The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.


AUTO PROGRAMME
Select ◻◻ and press OK

	SYS	PROG	CH
►	B/G	17	C35


MANUAL PROGRAMME PRESET
Select ◻◻ and press OK

PROG	SYS	CH	SEARCH	LABEL	AFT
13	B/G	C29	(off)	-----	(on)
14	B/G	C31	(off)	-----	(on)
15	B/G	C32	(off)	-----	(on)
16	B/G	C33	(off)	-----	(on)
►17	B/G	C35	(off)	-----	(on)
18	B/G	C40	(off)	-----	(on)
19	B/G	C42	(off)	-----	(on)
20	B/G	C46	(off)	-----	(on)
21	B/G	C50	(off)	-----	(on)
22	B/G	C54	(off)	-----	(on)

Preset channels automatically

1 Press MENU to display the main menu.

2 Select "Preset" with Δ+ or ∇− and press OK.
The PRESET menu appears. (See Fig. 5.)

3 Select "Auto Programme" with Δ+ or ∇− and press OK.
The AUTO PROGRAMME menu appears. (See Fig. 6.)

4 Press OK. Select if necessary the TV broadcast system with Δ+ or ∇− and press OK. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will be displayed in red on a black background.

5 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with Δ+ or ∇− or the number buttons (e.g. For "17", select "1") and press OK.
The second element of "PROG" will be displayed in red on a black background.

6 Select the second element of the double-digit number with Δ+ or ∇− or the number buttons (e.g. For "17", select "7") and press OK. (See Fig. 7.)

7 Using Δ+ or ∇−, select C (to start presetting from the C channels) or S (to start presetting from the S channels) and press OK.
The automatic channel presetting starts.
When presetting is finished, the preset menu reappears. (See Fig. 8.) All available channels are now stored on successive number buttons.
If you want to change to another broadcasting system, repeat 3-6.

8 Press MENU to return to TV picture.

To go back to the main menu
Keep pressing ⇽.

To stop automatic channel presetting
Press ⇽ on the Remote Commander.

Notes
- After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 17.
- You can exchange the programme positions to have them appear on screen in the order you like. For details, see "Exchanging the Programme Positions" on page 11.

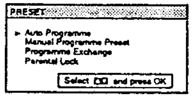

PRESET
► Auto Programme
Manual Programme Preset
Programme Exchange
Parental Lock
Select ◻◻ and press OK

Fig. 5

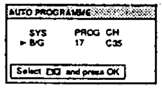

AUTO PROGRAMME
SYS
PROG
CH
► B/G
17
C35
Select ◻◻ and press OK

Fig. 6

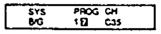

SYS
PROG
CH
B/G
17
C35

Fig. 7

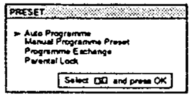

PRESET
► Auto Programme
Manual Programme Preset
Programme Exchange
Parental Lock
Select ◻◻ and press OK

Fig. 8

1-4. ADDITIONAL PRESETTING FUNCTIONS

Preset channels manually

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

1 Press MENU to display the main menu.

2 Select "Preset" with △+ or ▽− and press OK.
The PRESET menu appears. (See Fig. 9.)

3 Select "Manual Programme Preset" with △+ or ▽− and press OK.
The MANUAL PROGRAMME PRESET menu appears. (See Fig. 10.)

4 Using △+ or ▽−, select the programme position (number button) to which you want to preset a channel, and press OK.

5 Select, if necessary, the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with △+ or ▽−.
Then press OK. The CH position will be displayed in red on a black background. (See Fig. 11.)

6 Using △+ or ▽−, select C (to preset a regular channel), S (to preset a cable channel), or F (to tune in by frequency) and press OK.
The first element of the "CH" number will be displayed in red on a black background.
If you have selected EXT in step 4, select the video input source with △+ or ▽−. (See Fig.12.)
There are two ways to preset channels. If you know the channel number, go to step "7-Manual".

or

If you don't know the channel number, go to step "8-Search"

If you have made a mistake
Press ← to go back to the previous position.

To return to the main menu
Keep pressing ←.

7 Manual

-a Select the first element of the "CH" number with △+ ▽− or the number buttons and press OK.
The second element of the "CH" number will be displayed in red on a black background.

-b Select the second element of the number with △+ ▽− or the number buttons.
The selected number appears. (See Fig.13.)

-c Press OK.
The "SEARCH" position is highlighted and the selected channel is now stored.(See Fig. 14.)

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 7 to preset other channels.

To tune in a channel by frequency
After selecting F in step 6, enter three digits using the number buttons.

8 Search

-a Press OK repeatedly until the colour of the SEARCH position changes.

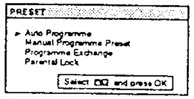
-b Start searching for the channel with △+ (up) or ▽−(down).
The CH position changes colour. (See Fig.15.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig.16.)

-c Press OK if you want to store this channel. If not, press △+ or ▽− to continue channel searching.

-d Press OK until the cursor appears by the next programme position.

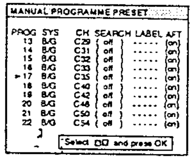
-e Repeat steps 3 to 7 to preset other channels.

9 Press MENU to return to TV picture.



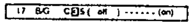
```
PRESET
 ► Auto Programme
   Manual Programme Preset
   Programme Exchange
   Parental Lock
            Select ⊡⊡ and press OK
```

Fig. 9



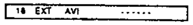
```
MANUAL PROGRAMME PRESET
PROG  SYS   CH  SEARCH  LABEL  AFT
  13  B/G   C29 ( off )  .....  (on)
  14  B/G   C31 ( off )  .....  (on)
  15  B/G   C32 ( off )  .....  (on)
  16  B/G   C33 ( off )  .....  (on)
► 17  B/G   C35 ( off )  .....  (on)
  18  B/G   C40 ( off )  .....  (on)
  19  B/G   C42 ( off )  .....  (on)
  20  B/G   C48 ( off )  .....  (on)
  21  B/G   C50 ( off )  .....  (on)
  22  B/G   C54 ( off )  .....  (on)
            Select ⊡⊡ and press OK
```

Fig. 10



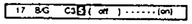
```
17  B/G   C▣5 ( off  ) ...... (on)
```

Fig. 11



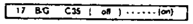
```
18  EXT   AVI          ......
```

Fig. 12



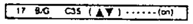
```
17  B/G   C3▣ ( off  ) ...... (on)
```

Fig. 13



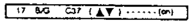
```
17  B/G   C35 ( off  ) ...... (on)
```

Fig. 14



```
17  B/G   C35 ( ▲▼ ) ...... (on)
```

Fig. 15



```
17  B/G   C37 ( ▲▼ ) ...... (on)
```

Fig. 16

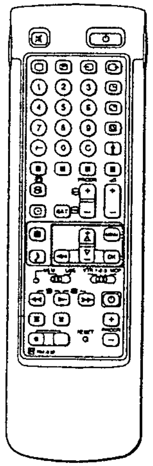
This section shows you additional presetting functions such as exchanging or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

You can skip this section, if not needed.

Before you begin

- Check that the Full Function side of the Remote Commander is visible.
- Locate the Menu operation buttons.

PROGRAMME EXCHANGE



Exchanging Programme Positions

With this function, you can exchange the programme positions to a preferable order.

1 Press MENU to display the main menu.

2 Select "Preset" with △+ or ▽− and press OK.
The PRESET menu appears.

3 Select "Programme Exchange" with △+ or ▽− and press OK.
The PROGRAMME EXCHANGE menu appears.(See Fig. 17.)

4 Using △+ or ▽−, select the programme position you want to exchange with another and press OK.
The colour of the selected position changes. (See Fig. 18.)

5 Using △+ or ▽−, select the programme position to be exchanged and press OK. Now the two programme positions have been exchanged. (See Fig. 19.)

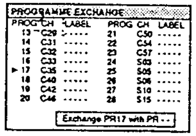
6 Repeat steps 4 and 5 to exchange other programme positions.

7 Press MENU to return to TV picture.

For programme positions beyond 15
The display scrolls automatically.

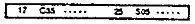
If you have made a mistake
Press ← to go back to the previous position

To go back to main menu
Keep pressing ←.



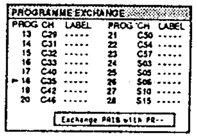
```
PROGRAMME EXCHANGE
PROG CH   LABEL     PROG CH   LABEL
  13 C29  .....       21 C50  .....
  14 C31  .....       22 C54  .....
  15 C32  .....       23 C57  .....
  16 C33  .....       24 S03  .....
► 17 C35  .....       25 S05  .....
  18 C40  .....       26 S06  .....
  19 C42  .....       27 S10  .....
  20 C46  .....       28 S15  .....
         Exchange PR17 with PR--
```

Fig. 17



```
17  C35 .....        25  S05 .....
```

Fig. 18



```
PROGRAMME EXCHANGE
PROG CH   LABEL     PROG CH   LABEL
  13 C29  .....       21 C50  .....
  14 C31  .....       22 C54  .....
  15 C32  .....       23 C57  .....
  16 C33  .....       24 S03  .....
  17 C40  .....       25 S05  .....
► 18 C35  .....       26 S06  .....
  19 C42  .....       27 S10  .....
  20 C46  .....       28 S15  .....
         Exchange PR18 with PR--
```

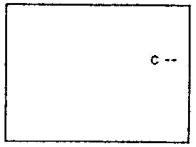
Fig. 19

Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

1 Press C on the Remote Commander. For cable channels, press C twice.
The indication "C" ("S" for cable channels) appears on the screen. (See Fig. 20.)

2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).
The channel appears.
However, the channel will not be stored.



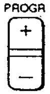
```
C --
```

Fig. 20

MANUAL PROGRAMME PRESET

Skipping Programme Positions

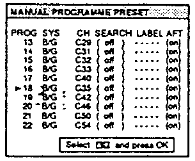
You can skip unused programme positions when selecting programmes with the PROGR +/– buttons. However, the skipped programmes may still be called up when you use the number buttons.



1 Press MENU to display the main menu.
2 Select "Preset" with Δ+ or ∇– and press OK.
The PRESET menu appears.
3 Select "Manual Programme Preset" with Δ+ or ∇– and press OK.
The MANUAL PROGRAMME PRESET menu appears. (See Fig.21.)
4 Using Δ+ or ∇–, select the programme position which you want to skip and press OK.
The "SYS" position changes colour.
5 Press Δ+ or ∇– until "----" appears in the SYSTEM position. (See Fig. 22.)
6 Press OK. (See Fig.23.)
When you select programmes using the PROGR+/– buttons, the programme position will be skipped.
7 Repeat steps 4 to 6 to skip other programme positions.
8 Press MENU to return to TV picture.

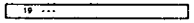
If you have made a mistake
Press ⟵ to go back to the previous position.

To go back to main menu
Keep pressing ⟵.



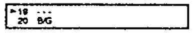
```
MANUAL PROGRAMME PRESET
PROG  SYS   CH  SEARCH  LABEL  AFT
  13  B/G   C29 ( off )  -----  (on)
  14  B/G   C31 ( off )  -----  (on)
  15  B/G   C32 ( off )  -----  (on)
  16  B/G   C33 ( off )  -----  (on)
  17  B/G   C40 ( off )  -----  (on)
►18  B/G   C35 ( off )  -----  (on)
  19  B/G   C42 ( off )  -----  (on)
  20  B/G   C46 ( off )  -----  (on)
  21  B/G   C50 ( off )  -----  (on)
  22  B/G   C54 ( off )  -----  (on)
          Select ◻◻ and press OK
```

Fig. 21



```
  19  ---
```

Fig. 22



```
►19  ---
  20  B/G
```

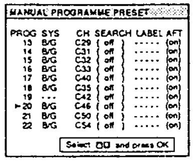
Fig. 23

MANUAL PROGRAMME PRESET

Captioning a Station Name

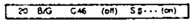
You can "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. BBC1). Using this function, you can easily identify which channel or video source you are watching.

1 Press MENU to display the main menu.
2 Select "Preset" with Δ+ or ∇– and press OK.
The PRESET menu appears.
3 Select "Manual Programme Preset" with Δ+ or ∇– and press OK.
The MANUAL PROGRAMME PRESET menu appears. (See Fig. 24.)
4 Using Δ+ or ∇–, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.
5 Select a letter or number with Δ+ or ∇– and press OK.
The next element will be highlighted.
Select other characters in the same way. If you want to leave an element blank, select – and press OK. (See Fig. 25.)
6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 26.)
7 Repeat steps 5 and 6 to caption names for other channels.
8 Press MENU to return to TV picture.



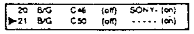
```
MANUAL PROGRAMME PRESET
PROG  SYS   CH  SEARCH  LABEL  AFT
  13  B/G   C29 ( off )  -----  (on)
  14  B/G   C31 ( off )  -----  (on)
  15  B/G   C32 ( off )  -----  (on)
  16  B/G   C33 ( off )  -----  (on)
  17  B/G   C40 ( off )  -----  (on)
  18  B/G   C35 ( off )  -----  (on)
  19  ---   C42 ( off )  -----  (on)
►20  B/G   C46 ( off )  -----  (on)
  21  B/G   C50 ( off )  -----  (on)
  22  B/G   C54 ( off )  -----  (on)
          Select ◻◻ and press OK
```

Fig. 24



```
  20  B/G   C46   (off)  S#--- (on)
```

Fig. 25



```
  20  B/G   C46   (off)  SONY- (on)
►21  B/G   C50   (off)  ----- (on)
```

Fig. 26

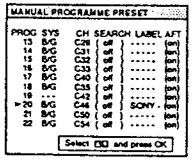
MANUAL PROGRAMME PRESET

Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

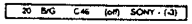
1 Press MENU to display the main menu.
2 Select "Preset" with Δ+ or ∇– and press OK.
The PRESET menu appears.
3 Select "Manual Program Preset" with Δ+ or ∇– and press OK.
The MANUAL PROGRAMME PRESET menu appears. (See Fig. 27.)
4 Using Δ+ or ∇–, select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
5 Fine-tune the channel with Δ+ or ∇– so that you get the best TV reception. As you press the cursor buttons, the frequency changes from – 15 to + 15. (See Fig. 28.)
6 After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 29.) Now the fine-tuned level is stored.
7 Repeat steps 4 to 6 to fine-tune other channels.
8 Press MENU to return to TV picture.

To reactivate AFT (automatic fine tuning)
Repeat from the beginning and select "ON" in step 5.



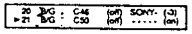
```
MANUAL PROGRAMME PRESET
PROG  SYS   CH  SEARCH  LABEL  AFT
  13  B/G   C29 ( off )  -----  (on)
  14  B/G   C31 ( off )  -----  (on)
  15  B/G   C32 ( off )  -----  (on)
  16  B/G   C33 ( off )  -----  (on)
  17  B/G   C40 ( off )  -----  (on)
  18  B/G   C35 ( off )  -----  (on)
  19  ---   C42 ( off )  -----  (on)
►20  B/G   C46 ( off )  SONY-  (on)
  21  B/G   C50 ( off )  -----  (on)
  22  B/G   C54 ( off )  -----  (on)
          Select ◻◻ and press OK
```

Fig. 27



```
  20  B/G   C46   (off)  SONY- (-3)
```

Fig. 28



```
  20  B/G   C46   (off)  SONY- (-3)
►21  B/G   C50   (off)  ----- (on)
```

Fig. 29

PARENTAL LOCK

Parental Lock

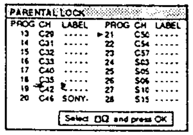
You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

1 Press MENU to display the main menu.
2 Select "Preset" with Δ+ or ∇– and Press OK.
The PRESET menu appears.
3 Select "Parental Lock" with Δ+ or ∇– and press OK.
The PARENTAL LOCK menu appears. (See Fig. 30.)
4 Using Δ+ or ∇–, select the programme position you want to block and press OK.
The selected PROG number, CH and LABEL change colour and the TV picture disappears indicating that this programme is now blocked. (See Fig. 31.)
5 Repeat step 4 to block other programme positions.
6 Press MENU to return to TV picture.

If you try to select a programme that has been blocked
The message "LOCKED" appears on the blank TV screen.

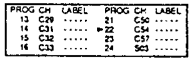
Cancelling blocking

1 On the PARENTAL LOCK menu, select the programme position you want to unblock with Δ+ or ∇–.
2 Press OK.
The selected PROG number, CH and LABEL change colour to normal colour and the TV picture appears indicating that the blocking has been cancelled.



```
PARENTAL LOCK
PROG  CH   LABEL    PROG  CH   LABEL
  13  C29  -----   ►21   C50  -----
  14  C31  -----    22   C54  -----
  15  C32  -----    23   C57  -----
  16  C33  -----    24   S03  -----
  17  C40  -----    25   S05  -----
  18  C35  -----    26   S06  -----
  19  C42  -----    27   S10  -----
  20  C46  SONY-    28   S15  -----
          Select ◻◻ and press OK
```

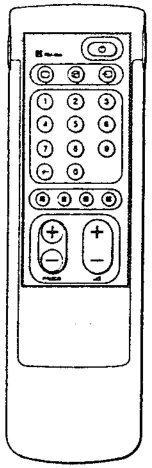
Fig. 30



```
PROG  CH   LABEL    PROG  CH   LABEL
  13  C29  -----    21   C50  -----
  14  C31  -----   ►22   C54  -----
  15  C32  -----    23   C57  -----
  16  C33  -----    24   S03  -----
```

Fig. 31

1-5. WATCHING THE TV



If no picture appears when you depress ⊙ on the TV and if the standby indicator on the TV is lit, the TV is in standby mode.
Press ○ or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress ⊙ on the TV.

Switching off temporarily

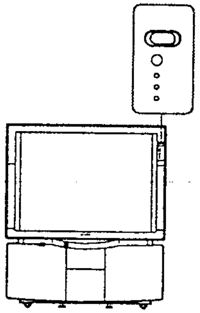
Press ⏻ on the Remote Commander.
The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press ○, PROGR +/–, or one of the number buttons on the Remote Commander.

Switching off completely

Depress ⊙ on the TV.



Selecting TV Programmes

Press PROGR +/– or press the number buttons.

To select a double-digit number

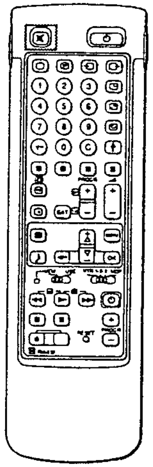
Press -/–, then the numbers.
For example, If you want to choose 23, press -/--, 2, and 3

Adjusting the Volume

Press ⊿ +/–.

For details of the teletext operation, refer to page 19.

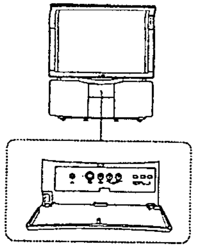
For details of the video input picture, refer to page 23.



Operating the TV Using the Buttons on the TV

With the –/+ buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

1 Press the P→⊿→⊕ button repeatedly until the programme number, ⊿ (for volume), or ⊕ (for video input picture) appears. Then adjust with the –/+ buttons.
2 Press the –/+ buttons to switch on the TV from the standby mode.
3 Press –/+ simultaneously to reset picture and sound controls to the factory preset level (RESET function).



Watching Teletext or Video Input

Watching teletext

1 Press ⊜ to view the teletext.
2 For teletext operation, enter a 3-digit page number with the number buttons to select a page.
For fastext operation, press one of the coloured buttons.
For both operations, press ⊕ (PAGE +) for the next page or ⊖ (PAGE –) for the preceding page.
3 To go back to the normal TV picture, press ○ .

Watching a video input picture

1 Press ⊕ repeatedly until the desired video input appears.
2 To go back to the normal TV picture, press ○.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press ⊙ once to display all the indications. They will disappear after a few seconds.
- Press ⊙ twice to have the programme number and label stay on screen. Press twice again to make the indications disappear.

Muting the sound

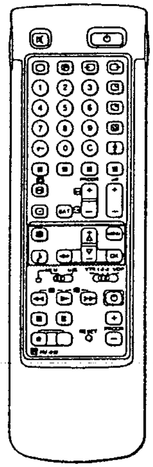
Press ≪.
To resume normal sound, press ≪ again.

Displaying the time

Press ◎. This function is available only when teletext is broadcast.
To make the time display disappear, press ◎ again.

1-6. ADJUSTING AND SETTING THE TV USING THE MENU

PICTURE CONTROL
SOUND CONTROL



Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste, in addition, you can change the aspect ratio of the TV display for wide screen effect or set the resolution to obtain a higher quality picture. You can also select dual sound (bilingual) programmes when available or adjust the sound for listening with the headphones.

1 Press ■ (for picture) or ♪ (for sound) on the remote Commander.

or

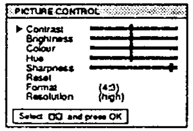
Press MENU and select "Picture Control" or "Sound Control", then press OK.
The PICTURE CONTROL or SOUND CONTROL menu appears. (See Fig. 32 or Fig. 33.)

2 Using △+ or ▽–, select the item you want to adjust and press OK.
The selected item changes colour. (See Fig. 34.)

3 Adjust the setting with △+ or ▽– and press OK.
The cursor appears beside the next item (at the left margin). (See Fig. 35.)
For the effect of each control, see the table below.

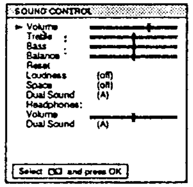
4 Repeat steps 2 and 3 to adjust other items.

5 Press MENU to return to TV picture.



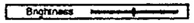
PICTURE CONTROL
▶ Contrast
Brightness
Colour
Hue
Sharpness
Reset
Format (4:3)
Resolution (high)
Select and press OK

Fig. 32



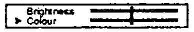
SOUND CONTROL
▶ Volume
Treble
Bass
Balance
Reset
Loudness (off)
Space (off)
Dual Sound (A)
Headphones:
Volume
Dual Sound (A)
Select and press OK

Fig. 33



Brightness

Fig. 34



Brightness
▶ Colour

Fig. 35

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less —+— More
Brightness	Darker —+— Brighter
Colour	Less —+— More
Hue	Greenish —+— Reddish
Sharpness	Softer —+— Sharper
Reset	Resets picture to the factory preset levels.
Format	(4:3)
Resolution	(high)

SOUND CONTROL	Effect
Volume	Less —+— More
Treble	Less —+— More
Bass	Less —+— More
Balance	More left —+— More right
Reset	Resets sound to the factory preset levels.
Loudness	off: Normal on: When listening to low volume sound.
Space	off: Normal on: Obtain acoustic sound effect.
Dual Sound	A: left channel B: right channel Stereo mono The selected mode of the A-CD-B Indicator on the TV lights up.
Headphones :	
Volume	Less —+— More
Dual Sound	A: left channel B: right channel Stereo mono

Note
This TV cannot select any format other than 4:3.

If you have made a mistake
Press ⬅ to go back to the previous position.

To go back to the main menu
Keep pressing ⬅.

Note
HUE is only available for NTSC colour systems and RESOLUTION does not work for SECAM colour systems.

Note on LINE OUT
The audio level and the dual sound mode output from the G- jack on the rear correspond to the Headphone VOLUME and DUAL SOUND settings.

When watching a video input picture
You can select DUAL SOUND to change the sound.

PROGRAMME TABLE

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

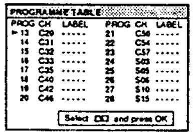
1 Press MENU to display the main menu.

2 Select "Programme Table" with △+ or ▽– and press OK.
The PROGRAMME TABLE menu appears. (See Fig. 36.)

3 Select the programme number with △+ or ▽– and press OK.
The selected programme appears.

4 To scroll to higher programme numbers, press▽–.

5 Press MENU to return to TV picture.

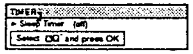


PROGRAMME TABLE

PROG	CH	LABEL	PROG	CH	LABEL
▶ 13	C29	-----	21	C50	-----
14	C31	-----	22	C54	-----
15	C32	-----	23	C57	-----
16	C33	-----	24	S03	-----
17	C35	-----	25	S05	-----
18	C40	-----	26	S06	-----
19	C42	-----	27	S10	-----
20	C46	-----	28	S15	-----

Select and press OK

Fig. 36



TIMER
▶ Sleep Timer (off)
Select and press OK

Fig. 37

TIMER

Using the Sleep Timer

You can select a time period after which the TV automatically switches into standby mode.

1 Press MENU to display the main menu.

2 Select "Timer" with △+ or ▽– and press OK.
The TIMER menu appears. (See Fig. 37.)

3 Press OK.
The time period option changes colour.

4 Select the time period with △+ or ▽–.
The time period (in minutes) changes as follows:

10 → 20 → 30 → 40 → 50 → 60 → 70 → 80 → 90
↑———— OFF ————┘

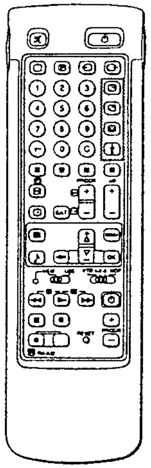
5 After selecting the time period, press OK.
The cursor moves back to the left margin and the timer starts counting.
One minute before the TV switches into standby mode, a message is displayed on the screen.

6 Press MENU to return to TV picture.

To switch off the timer
Select "OFF" in step 3.

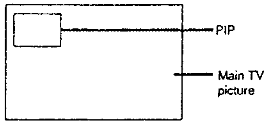
To check the remaining time
Press ⊕.

1-7. PIP (PICTURE IN PICTURE)



Note
RGB input source cannot be displayed in PIP.

With this function you can display a "PIP screen" (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 22.



Switching PIP on and off

Press ◔.
The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.

To Switch PIP off
Press ◔ again.

Selecting a PIP source

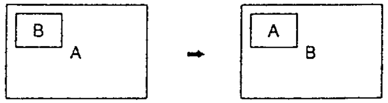
1 Press †.
The symbol † will be displayed at the bottom, left-hand corner of the screen.

2 Press ⇥ repeatedly until the desired PIP source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

Note
If no video source has been connected, the PIP picture will be noisy.

Swapping screens

Press ⟳.
The main screen will switch the picture with the PIP screen.

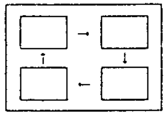


Notes

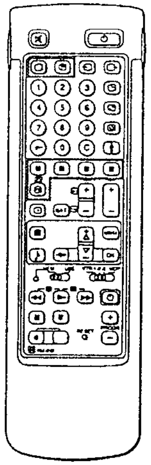
- If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press † and then the programme number buttons or PROGR +/–.
- Swapping screens takes about 2 seconds after pressing ⟳.
- After swapping screens if the colour systems of the main and PIP pictures are different, the PIP picture first appears in black and white and then in colour.

Changing the position of the PIP

Press ⊕ repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.



1-8. TELETEXT



Note
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander
You can switch teletext on and off, operate Fastext, and directly select page numbers.

Note
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

1 Select the TV channel which carries the teletext broadcast you want to watch.

2 Press ⊜ to switch on teletext.
A teletext page will be displayed (usually the index page).
If there is no teletext broadcast, "No text available" is displayed on the information line at the top of the screen.

To switch teletext off

Press ○.

Selecting a teletext page

With direct page selection

Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

1 Select a teletext page with a page overview (e.g. index page).

2 Press ⊞ twice. "Page catching" will be displayed on the information line. The last digit of the first displayed page number flashes.

3 Using Δ+ or ∇–, select the desired page and press OK.

The requested page will appear in a few seconds.

Accessing next or preceding page

Press ⊕ (PAGE+) or ⊖ (PAGE-).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

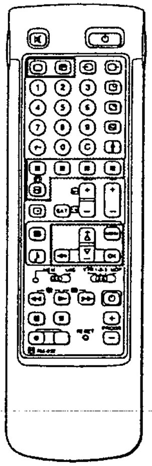
- Press ⊜ once in teletext mode or twice in TV mode.
- Press ⊜ again to resume normal teletext reception.

Preventing a teletext page from being updated

- Press ⊞ (HOLD). The HOLD symbol "⊞" is displayed on the information line.
- Press ⊜ to resume normal teletext reception.

Using Fastext

With Fastext you can access pages with one key stroke.
When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.
Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after a few seconds.



Note
Some of the features may not be available depending on the Teletext service.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 38.)

2 Using Δ+ or ∇–, select the teletext function you want and press OK. (See Fig. 39.)

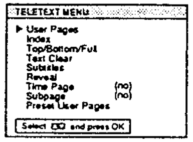

TELETEXT MENU
▶ User Pages
Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page (no)
Subpage (no)
Preset User Pages
Select ◻◻ and press OK

Fig. 38

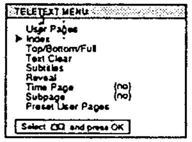

TELETEXT MENU
User Pages
▶ Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page (no)
Subpage (no)
Preset User Pages
Select ◻◻ and press OK

Fig. 39

USER PAGES/PRESET USER PAGES

See page 21 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display. After selecting the function, an information line Δ Top ∇ Bottom OK Full will be displayed. (See Fig. 40.)

Press Δ+ for Top to enlarge the upper half, ∇– for Bottom to enlarge the lower one and OK for Full to resume the normal size.

Press ⊜ to resume normal teletext reception.

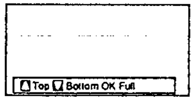

Top Bottom OK Full

Fig. 40

TEXT CLEAR

After selecting the function, you can watch a TV programme while waiting for a teletext page to be displayed. (See Fig. 41.)

Press ⊜ to resume normal teletext reception.

Fig. 41

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

REVEAL

Sometimes Pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After selecting the function, an information line Reveal on/off will be displayed. (See Fig. 42.)

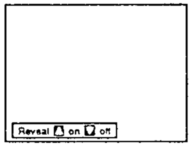

Reveal on off

Fig. 42

Using Δ+ or ∇–, select ON to reveal the information of OFF to conceal it again.

Press ⊜ to resume normal teletext reception.

TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

Press OK to select "OFF" for the TIME PAGE setting to cancel the request.

1 Using Δ+ or ∇–, select "ON". Press OK.

The TV programme you were watching before you selected TIME PAGE is restored.

An information window will be displayed at the bottom of the page.

2 To select the desired page, enter three digits for the page number (e.g. 301) using the number buttons and press OK.

3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons and press OK.

The selected time is displayed at the top in the left-hand corner.

At the requested time, the page will be displayed.
Press ⊜ to resume normal teletext mode.

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To cancel the request
Select SUBPAGE and press OK.

To select the desired subpage, enter four digits using PROGR +/– or the number buttons (e.g. enter 0002 for the second page of a sequence).

If two broadcasting stations use the same Teletext
You can preset one bank to 2 different programme positions.

User Page Bank System

You can store up to 30 pages in the "teletext page bank system" in this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

1 Press ⊜ (if Teletext is not already on) and MENU to show the TELETEXT MENU display.

2 Select "Preset User Pages" with Δ+ or ∇– and press OK.

3 Select the desired bank with >+or ?– and press OK.
The cursor will go to the first position (p1) of the preferred pages.

4 Input the three digits of your first preferred page with the number buttons.
The cursor will go to the second position.

5 Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number.

6 Select "Allocate Bank" with Δ+ or ∇– and press OK.

7 Select the programme position on which you want to store the preset pages with Δ+ or ∇– and press OK. (See Fig. 43)

8 Select the desired bank with Δ+ or ∇– (Banks A to E are available) and press OK.

9 Repeat steps 3 to 8 for the other 4 banks available.

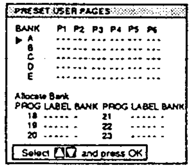

PRESET USER PAGES
BANK P1 P2 P3 P4 P5 P6
▶ A --- --- --- --- --- ---
B --- --- --- --- --- ---
C --- --- --- --- --- ---
D --- --- --- --- --- ---
E --- --- --- --- --- ---
Allocate Bank
PROG LABEL BANK PROG LABEL BANK
18 ----- - 21 ----- -
19 ----- - 22 ----- -
20 ----- - 23 ----- -
Select ◻◻ and press OK

Fig. 43

Displaying User Pages.

1 Select MENU.

2 Select "User Pages" with Δ+ or ∇ and press OK.
A table of the stored preferred pages will be displayed. (See Fig. 44.)

3 Select the desired page with Δ+ or ∇ and press OK.
The page will be displayed after some seconds.

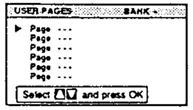
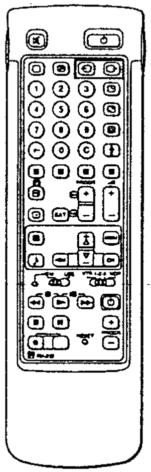

USER PAGES BANK
▶ Page ---
Page ---
Page ---
Page ---
Page ---
Page ---
Select ◻◻ and press OK

Fig. 44

Selecting input with PROGR +/– or number buttons
You can preset video input sources to the programme positions so that you can select them with PROGR +/– or number buttons. For details, see "Preset channels manually" on page 10.



Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input

Press -⊙ repeatedly to select the input source.

The symbol of the selected input source will appear. (See Fig. 45.)

To go back to the normal TV picture

Press ○.

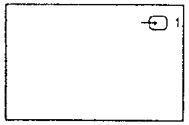


Fig. 45

Input modes

Symbol	Input signal
-⊙ 1	Audio/video input through the -⌓ 1 connector
-⌓	Audio/RGB input through the -⌓ 1 connector
-⊙ 2	Audio/video input through the ⊙→ 2/ -Ⓢ 2 connector
-Ⓢ 2	Audio/S video input through the ⊙→ 2/ -Ⓢ 2 or -Ⓢ 2 connector (4-pin connector)
-⊙ 3	Audio/video input through -⊙ 3 and -⊙ 3 on the front
-Ⓢ 3	Audio/S video input through the -Ⓢ 3 (4-pin connector) and -⊙ 3 connectors
-⊙ 4	Audio/video input through the ⊙→ 4/ -Ⓢ 4 connector
-Ⓢ 4	Audio/S video input through the ⊙→ 4 / -Ⓢ 4 or -Ⓢ 4 connector(4-pin connector)

You can also select the input mode using the P P→⊿→⊙ and –/+ buttons on the TV. In this case, first select -⊙, and then press –/+ buttons to select the input.

Selecting the output

The ⊙→ 2 / -Ⓢ 2 connector outputs the source input from the other connectors.

Press ⊙→ repeatedly to select the output.

The symbol of the selected output source appears. (See Fig. 46.)

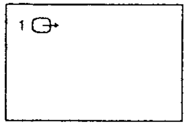
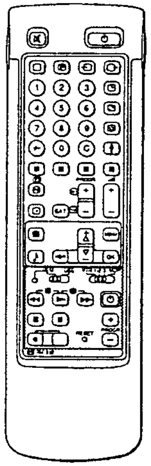


Fig. 46

Output modes

Symbol	⊙→ 2/ -Ⓢ 2 connector outputs
1 ⊙→	Audio/video signal from the -⌓ 1 connector
2 ⊙→	Audio/video signal from the ⊙→2/ -Ⓢ connector
2 Ⓢ→	Audio/S video signal from the ⊙→2/ -Ⓢ 2 or -Ⓢ 2 connector (4 pin)
3 ⊙→	Audio/video signal from the -⊙ 3, -⊙ 3 connectors
3 Ⓢ→	Audio/S video signal from the -Ⓢ 3, -⊙ 3 connectors
4 ⊙→	Audio/video signal from the ⊙→ 4/ -Ⓢ 4 connector
4 Ⓢ→	Audio/S video signal from the ⊙→ 4/ -Ⓢ 4 or -Ⓢ 4 connector (4 pin)
TV⊙→	Audio/video signal from the ╥ aerial terminal



When recording
when you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

1 Press MENU to display the main menu.

2 Select "Video Connection" with △+ or ▽– and press OK. The VIDEO CONNECTION menu appears. (See Fig. 47.)
You can see which source is selected for the TV and PIP input and for the output. If you want to select the input and output on this menu, go to the next step.

3 Select TV-screen (input source for the TV screen), PIP (input source for the PIP screen), or Output (output source) with △+ or ▽– and press OK.
One of the source items changes colour. (See Fig. 48.)

4 Select the desired source with △+ or ▽–. (See Fig. 49.)
For details about each source, see the table on page 23.

5 Press OK.
The selected source is confirmed, and the cursor appears. (See Fig. 50.)

6 Repeat steps 2 to 4 to select the source for other inputs or outputs.

7 Press MENU to return to TV picture.

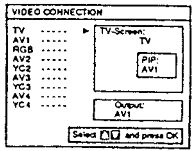


Fig. 47

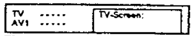


Fig. 48

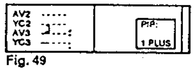


Fig. 49

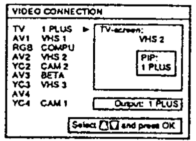


Fig. 50

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most of Sony remote-controlled video equipment such as: Beta, 8 mm and VHS VTRs and video disc players.

Tuning the Remote Commander to the equipment

1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:

VTR1:	Beta VTR
VTR2:	8 mm VTR
VTR3:	VHS VTR
MDP:	Video disc player

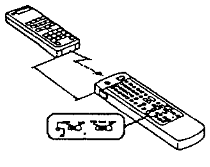
2 Use the buttons indicated in the illustration to operate the additional equipment.
If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.
If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

Remote Control of Non-sony equipment

The TV Remote Commander is programmable. This allows it to memorize the functions of other Remote Commanders using the keys shown in the illustration. A function may be set on any key and on any of the four positions of the VTR 1/2/3 MDP selector.

Note
- Do not move the two Remote Commanders during programming.
- Once the programming has been completed, ensure that the new functions are working properly. Occasionally, a function cannot be memorized.
- When replacing the batteries of the Remote Commander, the new functions will remain memorized for thirty minutes, even if the batteries are missing.

Memorizing the functions of audio and video equipment not made by Sony.



1 Set the MEM/USE selector to the MEM (programming) position.
2 Set the VTR 1/2/3 MDP selector to the desired position.
3 Arrange the two Remote Commanders facing each other as illustrated.
4 Press the TV Remote Commander button on which a function is to be programmed. The MEM indicator will light on the TV Remote Commander.
Note: If the MEM indicator flashes 8 times, there is no more space in the memory.
5 Press the button on the other Remote Commander for the function that is to be memorized. The function will be memorized immediately after the MEM indicator goes off.
6 Repeat steps 4 and 5 for all the functions that are to be programmed. If all the buttons of one position of the VTR 1/2/3 MDP selector have been given new functions, you will be able to select a new position and proceed with the programming of the remaining functions.
7 Once programming has been completed, set the MEM/USE selector of the TV Remote Commander to the USE position.
8 When using audio or video equipment, confirm that the VTR 1/2/3 MDP selector of the TV Remote Commander is set to the same position as the one found during programming.

Cancelling the programmed functions

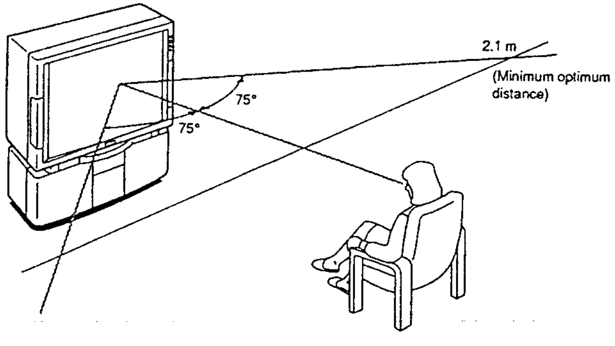
1 Set the MEM/USE selector to the MEM position.
2 Set the VTR 1/2/3 MDP selector to the position corresponding to the function that is to be deleted.
3 Press any programmable button. The MEM indicator will light.
4 Press the RESET button using a pencil. The MEM indicator will flash. Keep pressing the RESET button as long as the MEM indicator is flashing. All the functions programmed at this position will be deleted.
5 Set the MEM/USE selector to the USE position.

1-10. FOR YOUR INFORMATION

Optimum Viewing Area

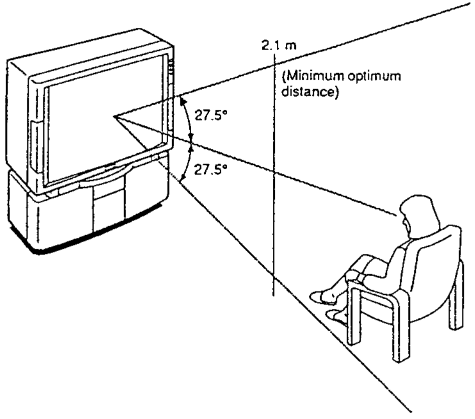
For the best picture quality, try to position the projection TV so that you can view the screen from within the areas shown below.

Horizontal viewing area



Optimum viewing position

Vertical viewing area



Optimum viewing position

Troubleshooting

Here are some simple solutions to some problems which may affect the picture and sound.

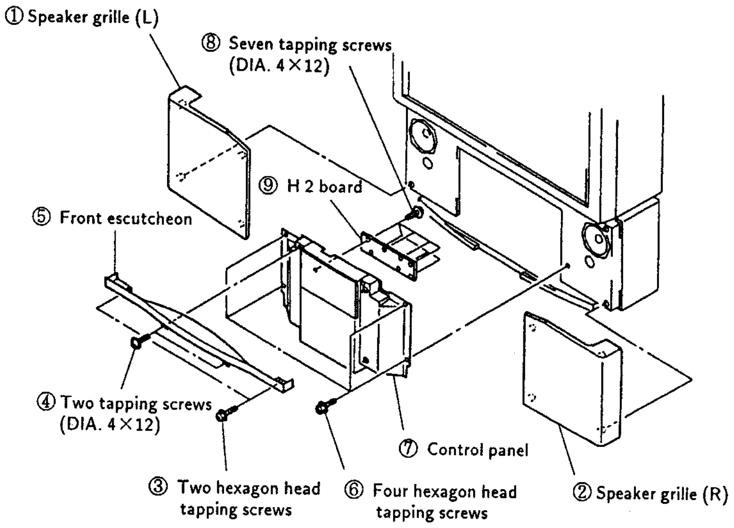
Problem	Solution
No picture (screen is dark), no sound	• Plug in the TV in. • Press Ⓘ on the TV (if ʘ indicator is on, press ○ or a programme number on the Remote Commander). • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for three or four seconds and then turn it on again using Ⓘ.
Poor or no picture (screen is dark), but sound is OK	• Press ■ to enter the PICTURE CONTROL menu and adjust the BRIGHTNESS, CONTRAST and COLOUR.
Good picture but no sound	• Press ⊿ +. • Check loudspeakers connection. • If 🔇 is displayed on the screen, press 🔇.
No colour for colour programmes	• Press ■ to enter the PICTURE CONTROL menu, select RESET, then press OK.
Remote Commander does not function	• The batteries are weak. • Set the MEM/USE selector to the USE position.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

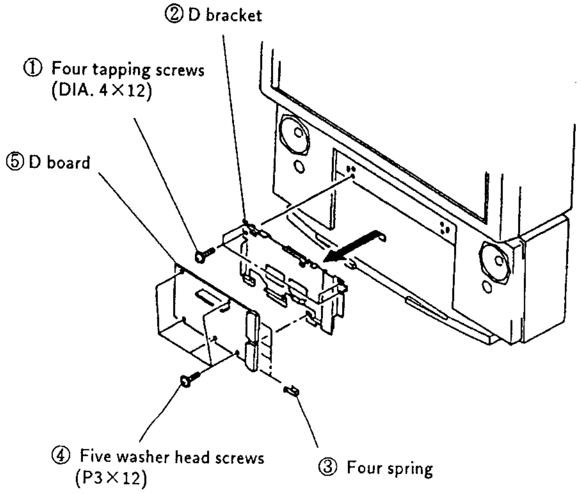
SECTION 2

DISASSEMBLY

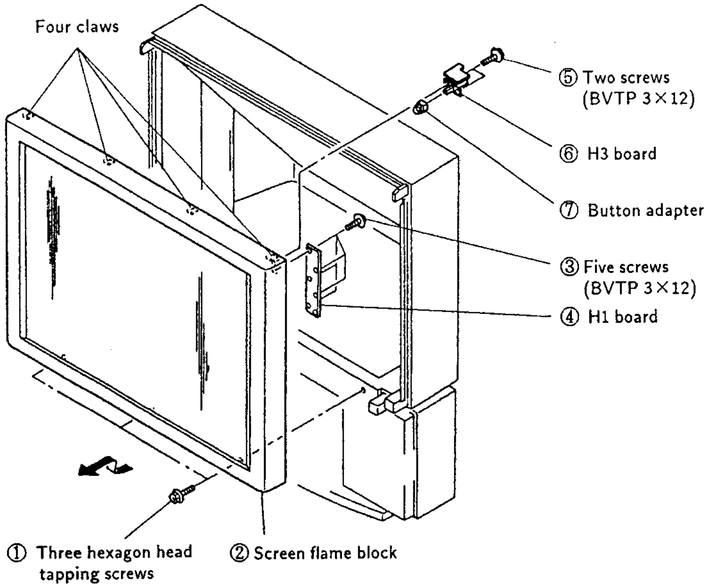
2-1. H 2 BOARD REMOVAL


① Speaker grille (L)
⑧ Seven tapping screws (DIA. 4×12)
⑨ H 2 board
⑤ Front escutcheon
④ Two tapping screws (DIA. 4×12)
⑦ Control panel
③ Two hexagon head tapping screws
⑥ Four hexagon head tapping screws
② Speaker grille (R)

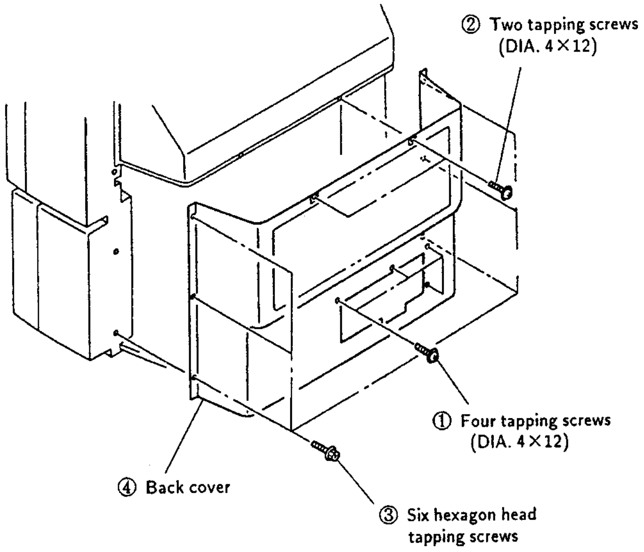
2-2. D BOARD REMOVAL


② D bracket
① Four tapping screws (DIA. 4×12)
⑤ D board
④ Five washer head screws (P3×12)
③ Four spring

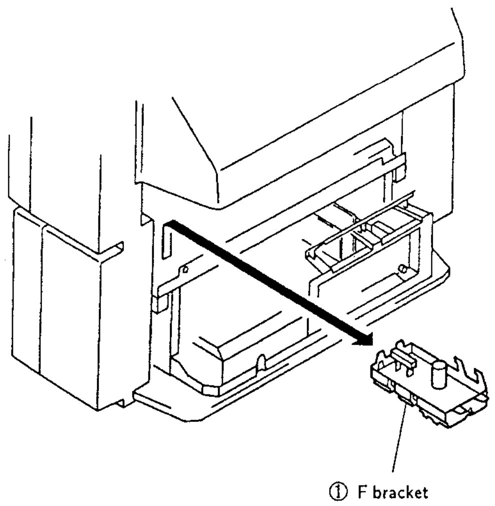
2-3. H1 AND H3 BOARDS REMOVAL


Four claws
⑤ Two screws (BVTP 3×12)
⑥ H3 board
⑦ Button adapter
③ Five screws (BVTP 3×12)
④ H1 board
① Three hexagon head tapping screws
② Screen flame block

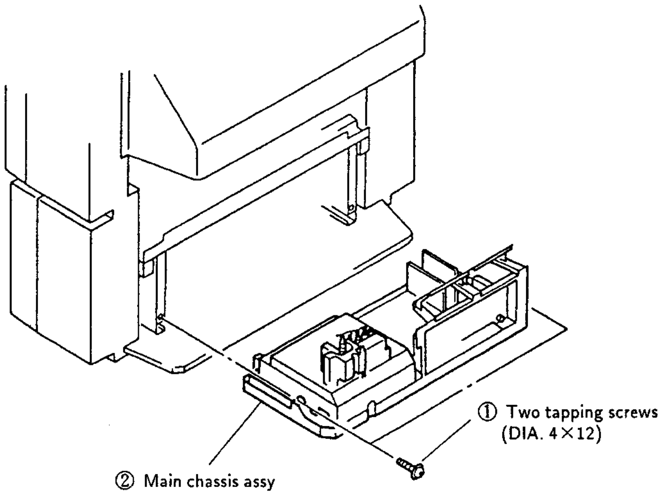
2-4. BACK COVER REMOVAL


② Two tapping screws (DIA. 4×12)
① Four tapping screws (DIA. 4×12)
④ Back cover
③ Six hexagon head tapping screws

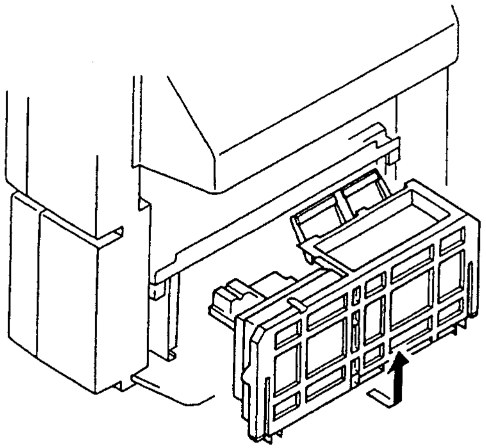
2-5. F BRACKET REMOVAL



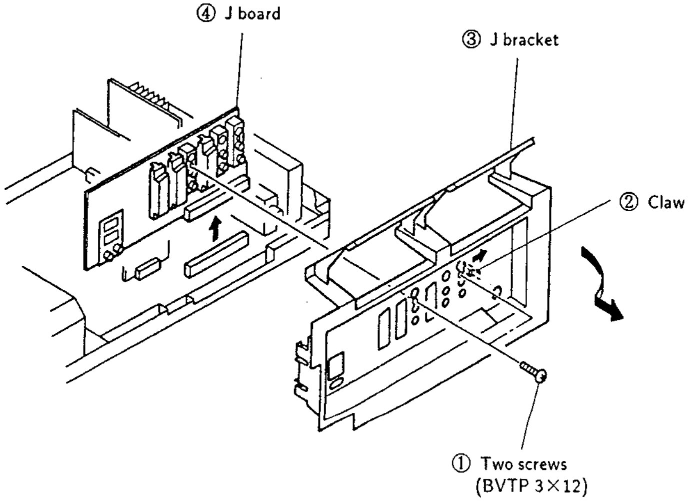
2-6. MAIN CHASSIS ASSY REMOVAL


① Two tapping screws (DIA. 4×12)
② Main chassis assy

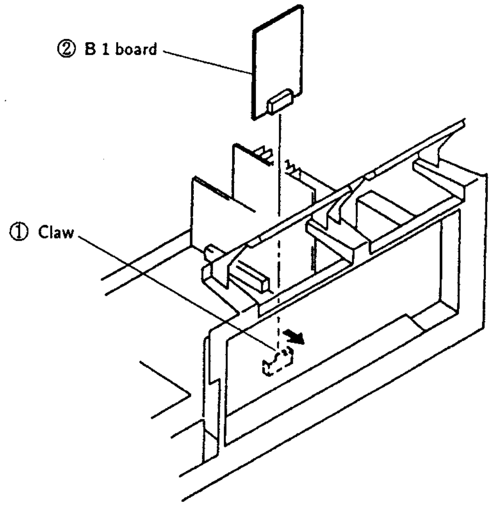
2-7. SERVICE POSITION



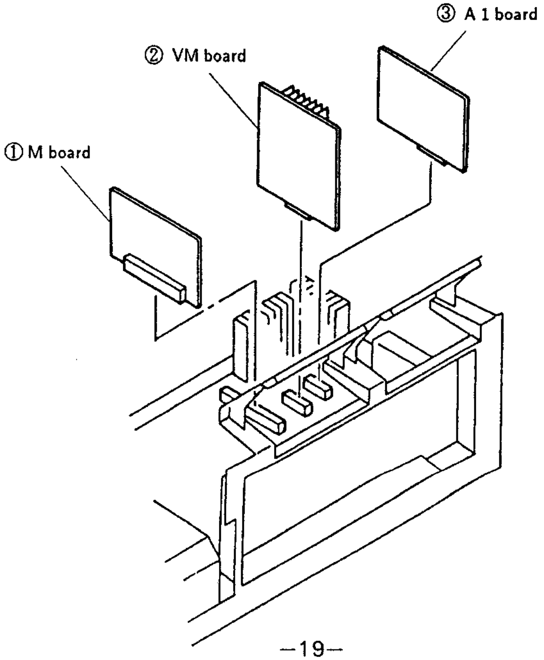
2-8. J BRACKET AND J BOARD REMOVAL


④ J board
③ J bracket
② Claw
① Two screws
(BVTP 3×12)

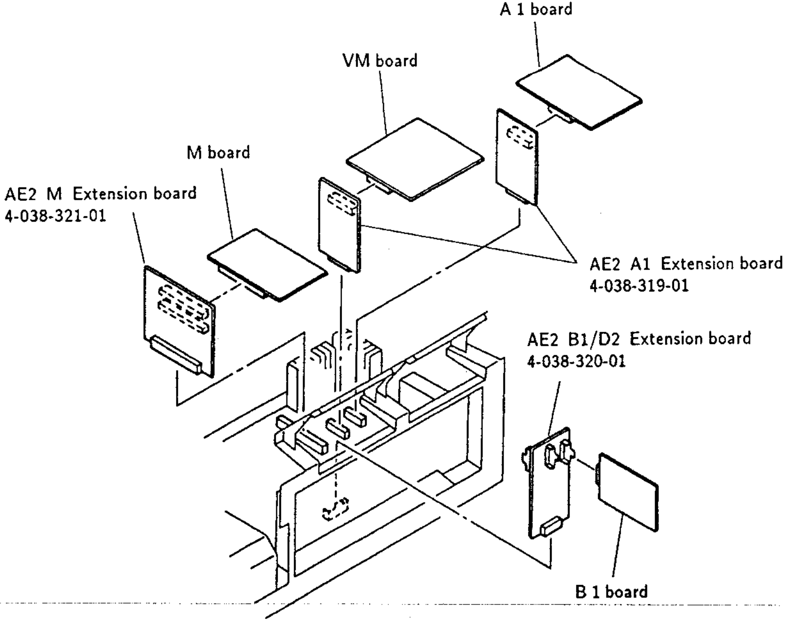
2-9. B 1 BOARD REMOVAL


② B 1 board
① Claw

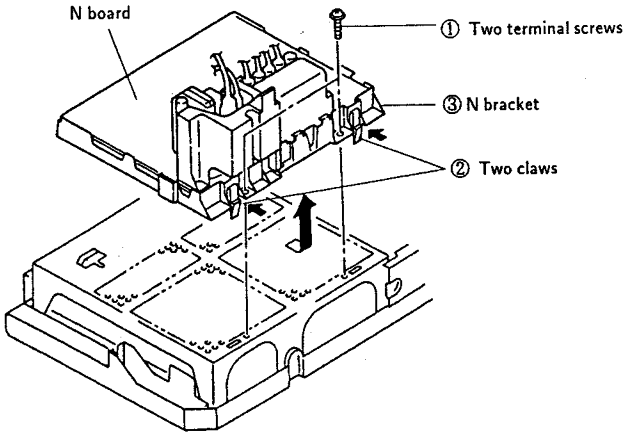
2-10. M, VM AND A 1 BOARDS REMOVAL


③ A 1 board
② VM board
① M board

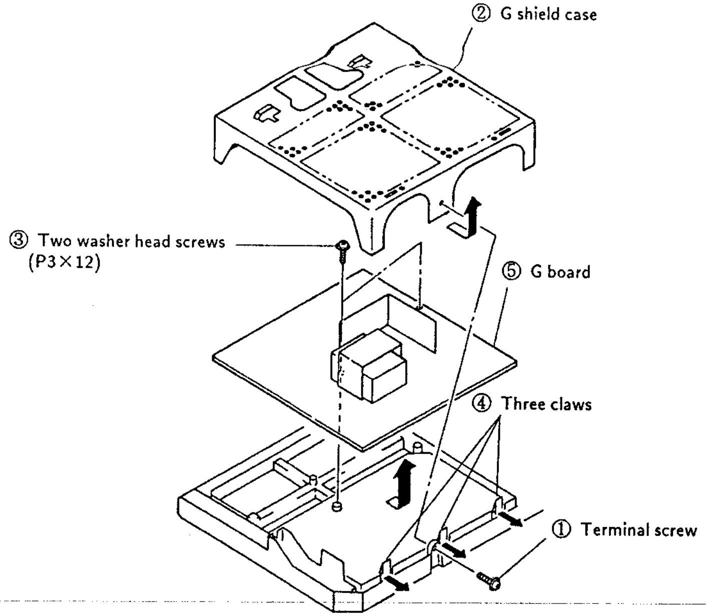
2-11. EXTENSION BOARD


A 1 board
VM board
M board
AE2 M Extension board
4-038-321-01
AE2 A1 Extension board
4-038-319-01
AE2 B1/D2 Extension board
4-038-320-01
B 1 board

2-12. N BRACKET REMOVAL


N board
① Two terminal screws
③ N bracket
② Two claws

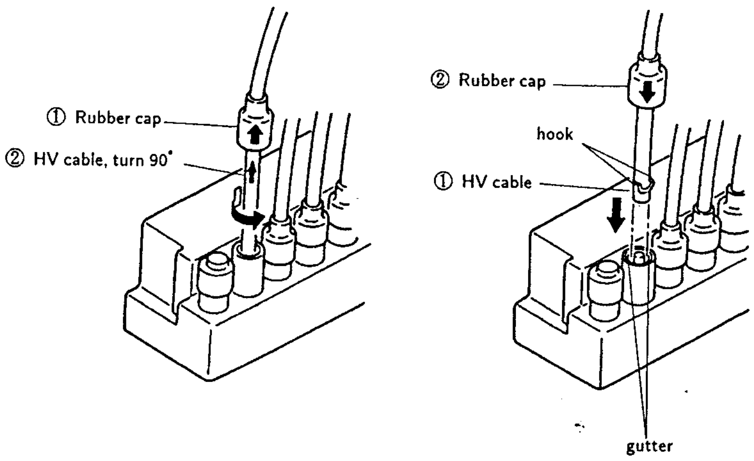
2-13. G BOARD REMOVAL


② G shield case
③ Two washer head screws
(P3×12)
⑤ G board
④ Three claws
① Terminal screw

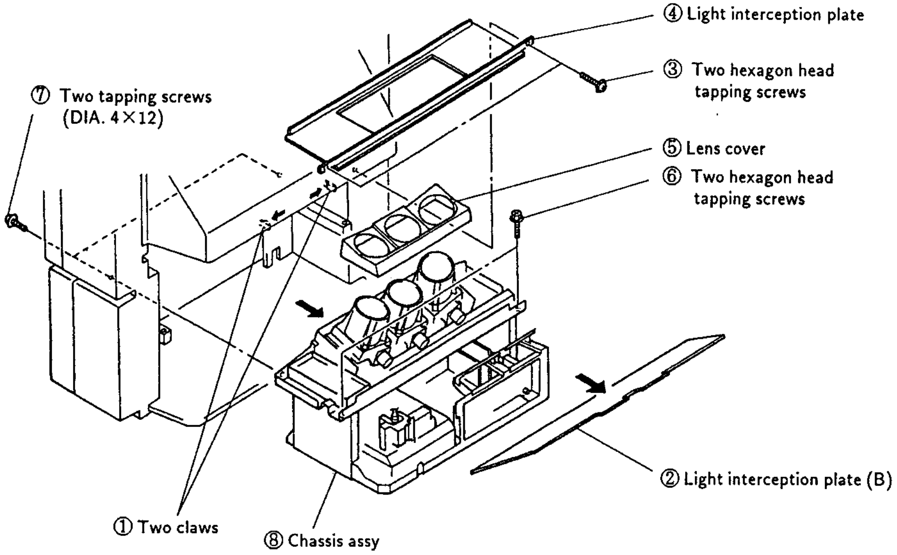
2-14. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Remover

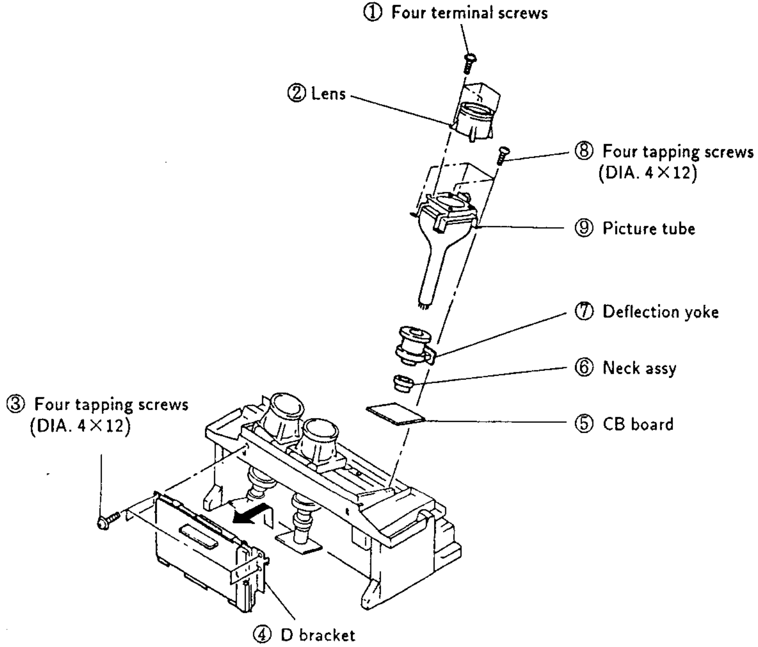
(2) Installation


① Rubber cap
② HV cable, turn 90°
② Rubber cap
hook
① HV cable
gutter

2-15. CHASSIS ASSY REMOVAL


④ Light interception plate
⑦ Two tapping screws
(DIA. 4×12)
③ Two hexagon head
tapping screws
⑤ Lens cover
⑥ Two hexagon head
tapping screws
② Light interception plate (B)
① Two claws
⑧ Chassis assy

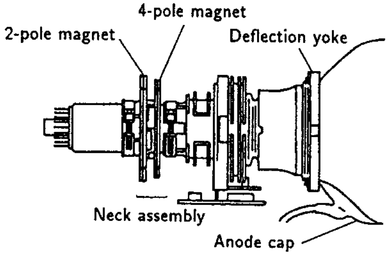
2-16. PICTURE TUBE REMOVAL


① Four terminal screws
② Lens
⑧ Four tapping screws
(DIA. 4×12)
⑨ Picture tube
⑦ Deflection yoke
⑥ Neck assy
⑤ CB board
③ Four tapping screws
(DIA. 4×12)
④ D bracket

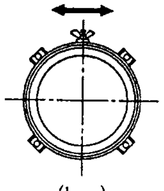
SECTION 3
SET-UP ADJUSTMENTS

3-1. FOCUS LENS ADJUSTMENTS

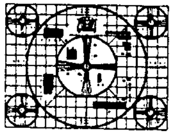
1. Set the D-board registration variable resistor (VR) and the position VR (CENTER VR) to mechanical.
2. Set the centering magnets (for red, green, and blue) to 0 as shown in the figure.

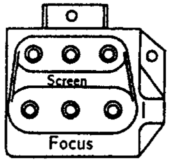

4-pole magnet
2-pole magnet
Deflection yoke
Neck assembly
Anode cap

3. Input monoscope signal. Set 50% BRIGHTNESS and minimum PICTURE. Make rough adjustment so that 10IRE of the monoscope signal becomes faintly luminous.
4. Set PICTURE and BRIGHTNESS maximum. Press the commander menu button. Select CONVERGENCE to display test signal.
5. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
Similarly, select B OFF to cut off blue output.
6. Turn the green lens to eliminate flare of the test signal.



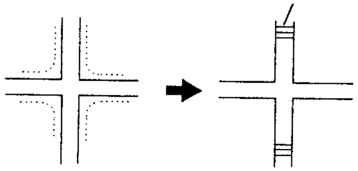
(Lens)



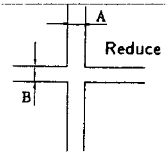

Screen
Focus

(Focus block)

Verify that scanning lines are seen.



7. Turn the green focus VR in the focus block to adjust green focus to reduce both A and B of the test signal to minimum.



Reduce both A and B to minimum.

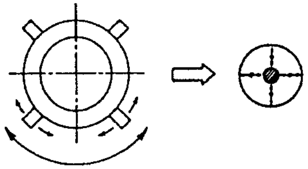
8. Repeat avobe 7. Couple of times to improve tracking and obtain an optimum lens focus. Then tighten the lens screws.

3-2. DEFLECTION YOKE POSITION ADJUSTMENTS

1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
Similarly, select B OFF to cut off blue output.
3. Loosen the deflection yoke (DY) fitting screws. Tilt the DY to obtain the best horizontal and vertical monoscope patterns.
4. After adjustment, press the DY onto the cathode ray tube (CRT) funnel and tighten the screws.
5. Also adjust DY positions for red and blue outputs in the same way.

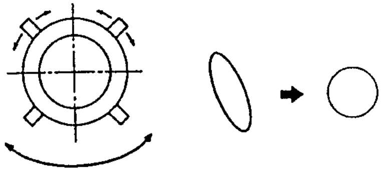
3-3. 2-POLE MAGNET ADJUSTMENT

1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block counterclockwise to brighten the point in the dot.
4. Adjust the 2-pole magnet to position the bright point at the center of the dot.
5. Adjust the red and blue dots in the same way.



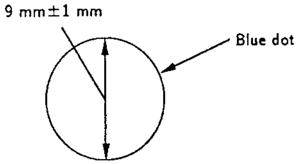
3-4. 4-POLE MAGNET ADJUSTMENT

1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block clockwise until the dot diameter becomes 15 mm to 20 mm.
4. Adjust the 2-pole magnet to make the dot perfectly round.
5. Adjust the red and blue dot in the same way.



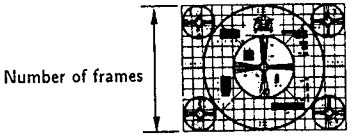
3-5. DE-FOCUS ADJUSTMENT (BLUE)

1. Input dot signal.
2. Turn the blue focus variable resistor (VR) in the focus block counter clock wise so that the diameter of the blue dot becomes 9±1mm.

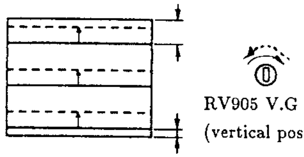


3-6. GREEN PICTURE ADJUSTMENTS

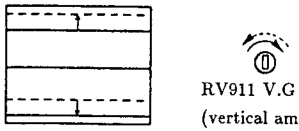
1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
   Similarly, select B OFF to cut off blue output.
3. Turn RV913 and RV960, the vertical green linearity variable resistors (V.G LIN VRs) on the D-board, to obtain an optimum vertical linearity.
   Then turn RV911, the vertical green amplitube variable resistor (V.G SIZE VR) to set vertical amplitude to 11.7 flames.
   Note: The vertical position indicator of the monoscope signal must be positioned at the center by adjusting RV905, the vertical green center position variable resistor (V.G CENT VR) in advance.



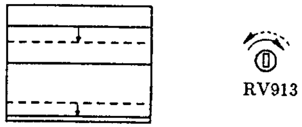
Monoscope signal



RV905 V.G CENT
(vertical position)

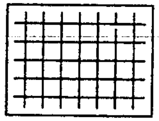


RV911 V.G SIZE
(vertical amplitude)

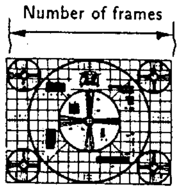


RV913

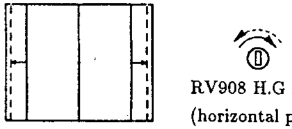
5. Verify that the horizontal lines on the top and bottom of cross-hatched area of the monoscope signal are horizontal and linear.



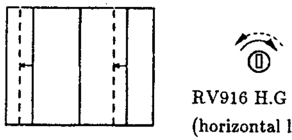
6. Turn RV916, RV964 and RV969, the horizontal green linearity variable resistors (H.G LIN VRs) on the D-board, to obtain an optimum horizontal linearity.
   Then turn RV908, the horizontal green amplitude variable resistor (H.G SIZE VR) to set horizontal amplitude to 15.6 frames.
   Note: The horizontal position indicator of the monoscope signal must be positioned at the center by adjusting RV902, the horizontal green center position variable resistor (V.G CENT VR) in advance.



Monoscope signal



RV908 H.G SIZE
(horizontal position)



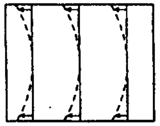
RV916 H.G LIN
(horizontal linearity)

7. Input cross hatch signal.
   Turn vertical green (V.G) and horizontal green (H.G) variable resistors (VRs) and make adjustments according to the following steps :

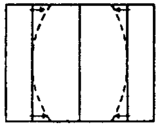
(Adjustment procedure)

1. [BOW] → [SKEW] → [CENT (center position)]
2. [PIN (pin warp)] → [SUB BOW] → [BOW]
3. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
4. [M.WAVE (middle sine wave warp)] →
   [WAVE-A (upper and lower sine wave warp)] →
   [WAVE-U (upper sine wave warp)]
   ※ For vertical (V) only.
5. [V-M.PIN (vertical middle pin warp)] →
   [V/WING (vertical wing warp)]
   ※ For vertical (V) only.
6. [H-M.PIN (horizontal middle pin warp)]
   ※ For horizontal (H) only.

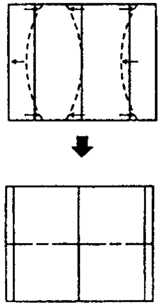
(Dot motion)



RV932 H.G BOW
(horizontal green bow)

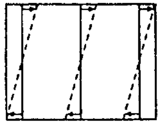


RV941 H.G PIN
(horizontal green pin warp)

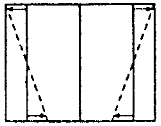


RV950 H.G SUB BOW
(horizontal green sub bow)

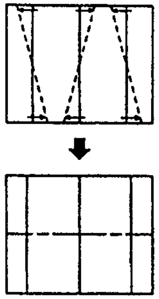
V.G BOW	RV935
V.G PIN	RV938
V.G SUB BOW	RV953



RV920 H.G SKEW
(horizontal green skew)

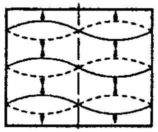


RV925 H.G KEYS
(horizontal green trapezoid)

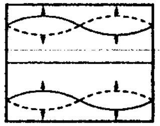


RV944 H.G SUB SKEW
(horizontal green sub skew)

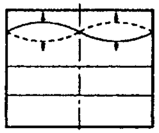
V.G SKEW	RV923
V.G KEYS	RV929
V.G SUB SKEW	RV947



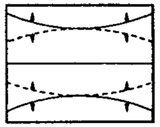
RV962 V-M-WAVE
(vertical middle sine wave warp)



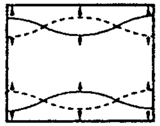
RV975 V-WAVE-A
(vertical upper and lower sine wave warp)



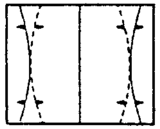
RV978 V-WAVE-U
(vertical upper sine wave warp)



RV980 V-M. PIN
(vertical middle pin warp)
※ Common in red, green, and blue



RV957 V/WING
(wing warp)
※ Common in red, green, and blue



RV956 H/M. PIN
(vertical middle pin warp)

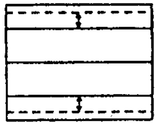
3-7. GREEN AND RED REGISTRATION ADJUSTMENTS

1. Input cross hatch signal.
2. Enter service mode. Select B OFF of SERVICE MODE to cut off blue output.
3. Turn the vertical red (V.R) and horizontal red (H.R) variable resistors (VRs) to adjust red picture convergence in relation to green picture according to the following steps :

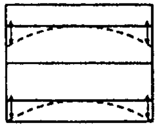
(Adjustment procedure)

1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)] →
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW] [H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]

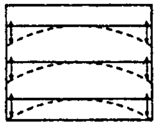
(Dot motion)



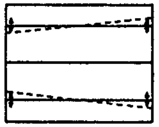
RV912 V.B SIZE
(vertical red amplitude)



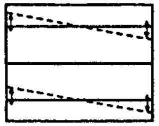
RV952 V.R SUB BOW
(vertical red sub bow)



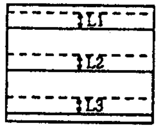
RV943 V.R BOW
(vertical red bow)



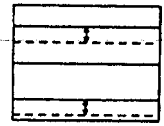
RV928 V.R KEYS
(vertical red trapezoid)



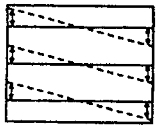
RV946 V.R SUB SKEW
(vertical red sub skew)



RV904 V.R CENT
(vertical red center position)



RV917 V.R LIN
(vertical red linearity)



RV922 V.R SKEW
(vertical red skew)

H.R LIN	RV915
H.R SIZE	RV907
H.R CENT	RV901
H.R BOW	RV931
H.R SKEW	RV919
H.R PIN	RV940
H.R KEYS	RV926
H.R SUB BOW	RV949
H.R SUB SKEW	RV943
V-M-WAVE	RV973
V-WAVE-A	RV976
V-WAVE-U	RV979
V-M.PIN	RV980
V/WING	RV957
H/M.PIN	RV956

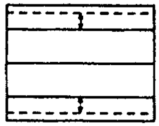
3-8. GREEN AND BLUE REGISTRATION ADJUSTMENTS

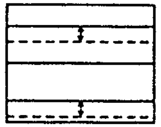
1. Input cross hatch signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
3. Turn the vertical blue (V.B) and horizontal blue (H.B) variable resistors (VRs) to adjust blue picture convergence in relation to green picture according to the following steps :

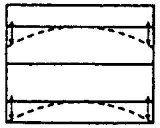
(Adjustment procedure)

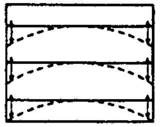
1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)] →
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW] [H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)] →

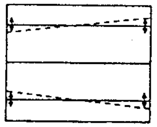
(Dot motion)

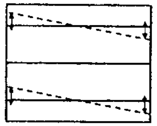

RV912 V.B SIZE
(vertical blue amplitude)

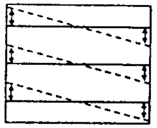

RV918 V.B LIN
(vertical blue linearity)

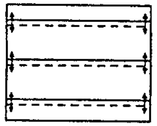

RV954 V.B SUB BOW
(horizontal blue sub bow)

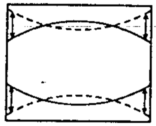

RV936 V.B BOW
(vertical blue bow)

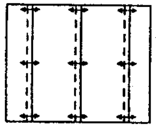

RV930 V.B KEYS
(vertical blue trapezoid)

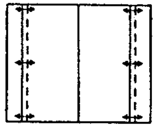

RV948 V.B SUB SKEW
(vertical blue sub skew)

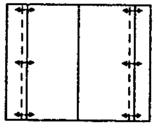

RV924 V.B SKEW
(vertical blue skew)

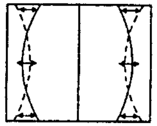

RV906 V.B CENT
(vertical blue center position)

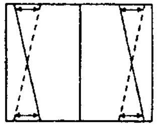

RV939 V.B PIN
(vertical blue pin warp)

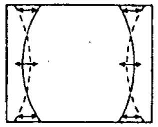

RV903 H.B CENT
(vertical blue center position)

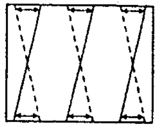

RV909 H.B SIZE
(horizontal blue amplitude)

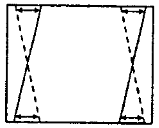

RV914 H.B LIN
(horizontal blue linearity)

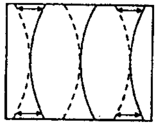

RV942 H.B PIN
(horizontal blue pin warp)

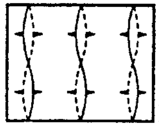

RV954 H.B SUB SKEW
(horizontal blue sub skew)

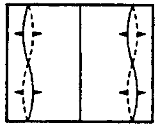

RV951 H.B SUB BLOW
(horizontal blue sub bow)


RV921 H.B SKEW
(horizontal blue skew)


RV927 H.B KEYS
(horizontal blue trapezoid)


RV933 H.B BOW
(horizontal blue bow)


RV981
※ Common in red, green, and blue


RV982
※ Common in red, green, and blue

H/M PIN	RV958
M.WAVE	RV961
WAVE-A	RV974
WAVE-U	RV977

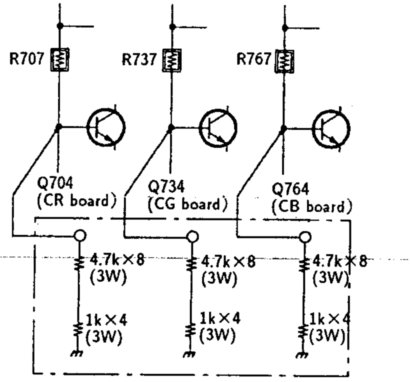
3-9. REGISTRATION ADJUSTMENTS

1. Out put red, blue, and green.
2. Out put cross hatch and monoscope signals to check registration. Also check focus.

3-10. WHITE BALANCE ADJUSTMENTS

1) Screen adjustment

1. Input white signal.
2. Remove connectors CR-15, CG-16, and CB-17.
3. Fit jigs between the ground and R707, R737, and R767.



※ Resistors in each jig are connected serial.

4. Turn the RGB (red, green, and blue) screen variable resistors in the focus block to make the flyback line faint. Stop before the line completely disappears.
5. Insert connectors CR-15, CG-16, and CB-17.

2) White balance adjustments (09, 14, 15, 16, 17)

1. Input monoscope signal and enter service mode.
2. Select the picture quality adjustment from the menu and set PICTURE minimum. Select the CXA1587S service item.
3. Use the commander to adjust 09 (SUB BRIGHT) so that 10IRE of the monoscope pattern becomes faintly luminous.
4. Input white signal.
5. Set PICTURE minimum. Adjust item 16 (green cut off) and 17 (blue cut off) to obtain an optimum white balance.
6. Set PICTURE maximum. Adjust 14 (green-drive) and 15 (bluedrive) to obtain an optimum white balance.
7. Repeat white balance adjustment alternating PICTURE setting at the minimum and maximum.

SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-832.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

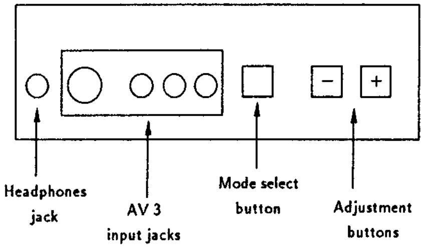


Fig.4-1

2. "TT" will appear on the upper right corner of the screen.

Command operation in service mode

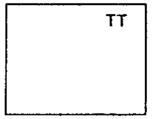


Fig.4-2

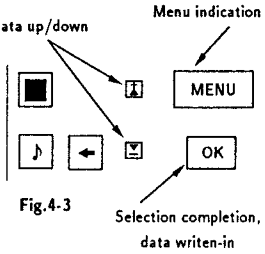

Item selection, data up/down
Menu indication
MENU
OK
Selection completion, data writen-in

Fig.4-3

3. Press the MENU button of the commander to get the menu on screen.

MAIN MENU
Programme Table
Video Connection
Picture Control
Sound Control
Timer
Preset
Language
> Demo convergence
Select < > and press OK

Fig.4-4

4. Press the ▲ and ▼ buttons of the commander and move > to DEMO.
5. Press OK button to proceed to the next menu.
6. The menu of fig.4-5 will appear on screen. Select DEVICE corresponding to the adjustment item from the table on next page.

DEVICE
Init
> CXA 1587
CXD 2018
TDA 9145
CXA 1526
TDA 6612
CX 7948 A
PIP
Select < > and press OK

Fig.4-5

7. If adjustment item is CXA 1587, press the ▼ button and move > to CXA 1587.

CXA 1587

Item No.	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
> 09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.

8. Press OK button to get the next selection menu.
9. Press ▼ button and move > to the adjustment item and press OK button.
10. Press the ▲ and ▼ buttons to change the data in order to comply each standard.
11. Press OK button to write data.
12. Turn off the power to quit service mode when completing the adjustment.

CXA 1587

Item No.	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	0
22	DC TRANSFER RATIO	3
23	DINAMIC PICTURE	2
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	ALL BLK	OFF
30	H SHIFT	32
31	DAC TEST	OFF
32	PRE/OVER SHOOT	7
33	SHARPNESS FO	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1	OFF
39	AGING 2	OFF
40	AKB	ON
41	INHIBIT RGB	OFF
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE SW	OFF
46	V EXTENTION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC	ON
50	REF.POSITION	0

CXA 1526

Item No.	Adjustment item	Data Amount
01	DC SHIFT	32
02	UPPER Y BOW	4
03	LOWER Y BOW	5
04	H.AMP	48
05	H TILT	29
06	UPPER COR BOW	32
07	UPPER TILT	32
08	LOWER COR BOW	32
09	LOWER TILT	32

CXD 2018

Item No.	Adjustment item	Data Amount
01	V SIZE	No ADJ.
02	V SHIFT	No ADJ.
03	S CORRECTION	No ADJ.
04	V LINEARITY	No ADJ.
05	H SIZE	No ADJ.
06	PIN AMP	No ADJ.
07	TILT	No ADJ.
08	UPPER CORNER	No ADJ.
09	LOWER CORNER	No ADJ.
10	V BOW	No ADJ.
11	ANGLE	No ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	No ADJ.

Typical Value (OSD based)when receiving PAL Philips pattern.

TDA 6612

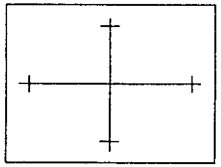
Adjustment item	Data Amount
Stereo-Separation	30

Should be adjusted twice 4 : 3 and 16 : 9 mode.

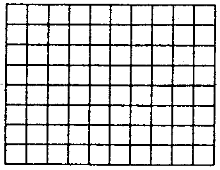
CX 7948 a	
Cross Bar	(off)
Mesh	(off)
Fine Mesh	(off)

Select ▲ ▼ and press OK.

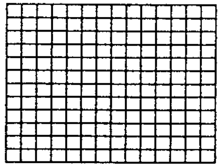
Cross Bar (on)



Mesh (on)



Fine Mesh (on)



Y FILTER ADJUSTMENT

1. Input PAL RED pattern.
2. Connect an oscilloscope to CN 0123 ① pin (R OUT) on the A board.
3. Enter into service mode and press 3, 8.
4. Adjust data by △ or ▽ to minimize the chroma element of CN 0123 ① pin.

SUB BRIGHTNESS ADJUSTMENT

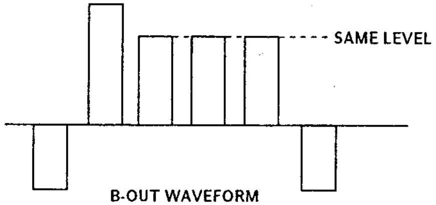
1. Input Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of the grey scale and CUT -OFF 20-IRE glitter slightly.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains small 100% area on the Black Back ground.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Adjust data so that 2.5 Vp-p can be obtained at ① CN 0123 (R out).

SUB COLOR ADJUSTMENT

1. Input PAL color bar.
2. Connect an oscilloscope to CN 0125 ① pin (B OUT) on the A board.
3. Enter into service mode and press 22 of CXA 1587, 8 SUB COLOR.
4. Adjust data so that the right sides of the waveform will be the same.



B-OUT WAVEFORM

STEREO-SEPARATION ADJUSTMENT

1. Input 1 kHz stereo signal to the L-ch and 400 Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound does not leak to the R-ch and the L-ch.

DRIVE AND CUT OFF

See direct test mode list attached and refer to sub brightness or such for adjustment method.

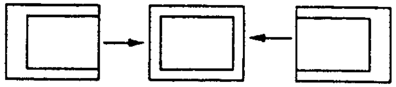
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode and select CXD 2018.
2. Select and adjust each item in order to get an optimum image.

CXD 2018

Item No.	Adjustment item	Data Amount
01	V SIZE	No ADJ.
02	V SHIFT	No ADJ.
03	S CORRECTION	No ADJ.
04	V LINEARITY	No ADJ.
05	H SIZE	No ADJ.
06	PIN AMP	No ADJ.
07	TILT	No ADJ.
08	UPPER CORNER	No ADJ.
09	LOWER CORNER	No ADJ.
10	V BOW	No ADJ.
11	ANGLE	No ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	No ADJ.

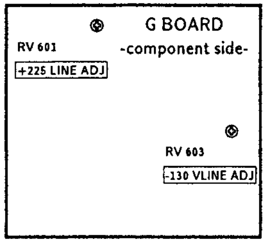
H SHIFT



3. Press OK button to write the data.

If menu display may disturb the adjustment press 🔇 to clear, to resume it, press 🔇 again.

4-2. G BOARD ADJUSTMENTS



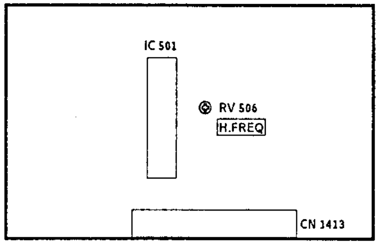
+225 V LINE ADJUSTMENT (RV 601)

1. Input the color-bar signal.
2. Connect a digital multimeter to emitter of Q 604.
3. Adjust RV 601 so that voltage is +225 V±0.5 V.

–130 V LINE ADJUSTMENT (RV 603)

1. Input the color-bar signal.
2. Connect a digital multimeter to emitter of Q 612.
3. Adjust RV 603 so that voltage is -130 V±0.1 V.

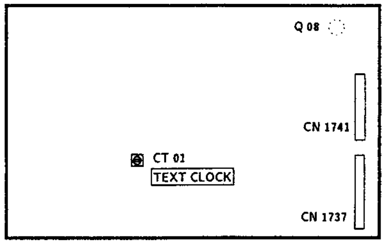
4-3. M BOARD ADJUSTMENT



H.FREQ ADJUSTMENT (RV 506)

1. Connect GND to ⑫ pin of IC 501 on M board.
2. Connect a frequency counter to ④ pin of IC 501.
3. Adjust RV 506 on M board to 15,625+100 Hz.
4. Remove ⑫ pin of IC 501 from GND.

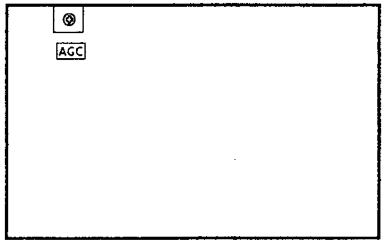
4-4. V BOARD ADJUSTMENT



TEXT CLOCK ADJUSTMENT (CT 01)

1. Get TEXT MENU on screen.
2. Connect GND and the base of Q 08 on V board.
3. Adjust CT 01 on V board so that the MENU stands still as much as possible.

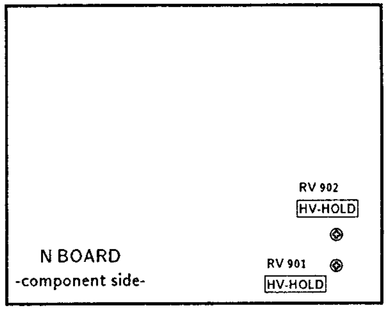
4-5. IF ADJUSTMENT



AGC ADJUSTMENT (IF BLOCK)

1. Receive off-air signal.
2. Adjust AGC VR so that there is no snow noise and cross-modulation.
3. Change receiving channel and confirm status.

4-6. N BOARD ADJUSTMENTS


RV 902
HV-HOLD
N BOARD
-component side-
RV 901
HV-HOLD

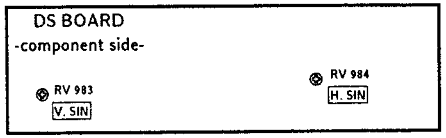
HV-HOLD DOWN ADJUSTMENT

1. Connect the HV meter.
2. Receive dot pattern.
3. Adjust HV to 33.5±0.1 KV by RV 901.
4. Slowly turn the RV 902 till HV-HOLD DOWN work.
5. RV 902 fixed with RTV.

HV-REGULATOR ADJUSTMENT

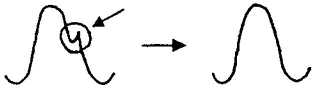
1. Connect the HV meter.
2. Receive dot pattern.
3. Adjust HV to 31.5±0.1 KV by RV 901.
4. RV 901 fixed with RTV.

4-7. DS BOARD ADJUSTMENTS


DS BOARD
-component side-
RV 983
V. SIN
RV 984
H. SIN

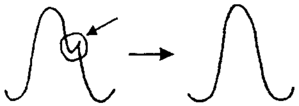
H. SIN ADJUSTMENT

1. Connect an oscilloscope to pin ① of IC 1712 on DS board.
2. Adjust H. SIN by RV984.



V. SIN ADJUSTMENT

1. Connect an oscilloscope to pin ⑦ of IC 1712.
2. Adjust V. SIN by RV983.



Model name Item	KP-S 4613
Pal Comb	ON
PiP	ON
RGB Priority	ON
Woofer Box	OFF
Scart 1	ON
Scart 2	ON
Front in (3)	ON
Scart 4	ON
Dyn. Convergence	OFF
Projector	ON
A×B in 16 : 9 mode	ON
Norm B/G	ON
Norm I	ON
Norm D/K	ON
Norm AUS	OFF
Norm L	ON
Norm SAT	OFF
Norm M	OFF
Language Preset	English

4-8. TEST MODE 2 :

Is available by pressing Test button two times, OSD "TT"appears. The functions described bellow are available by pressing the two numbors. To release the Test Mode 2, press two times 0, or switch TV in Standby Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Aging Condition (Volumin., Picture max., Brightness max., Aging 2 Mode of CXA 1587, TDA 2595 is locked to CXA 1587 via PIN 34 of μ-Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	dummy
10	Tenth entry is deleted
11	Balance
12	Hue
13-14	dummy
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM
17	Preset Lavel for AV Sources
18	dummy
19	Stereo Seperation
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24-29	dummy
30	Tenth entry is deleted
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)
35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
38	Y-Filter adjustment (Trap is switched off and TDA 9145 is switched in forced NTSC Mode)
39	dummy
40	Tenth entry is deleted
41	Default setting of CXA 1587 (Only in Plog 99 available)
42	Default setting of CXA 2018 (Only in Plog 99 available)
43	Default setting of CXA 1526 (Only in Plog 99 available)
44	(all Port High) Not yet
45	(all Port High) Not yet
46-48	dummy
49	Erease the NVM Testbyte (this byte detects already stored NMV's) After selecting this function, switch TV Off and On → the NVM will be preset by μ-Controller. (Not the channel data)

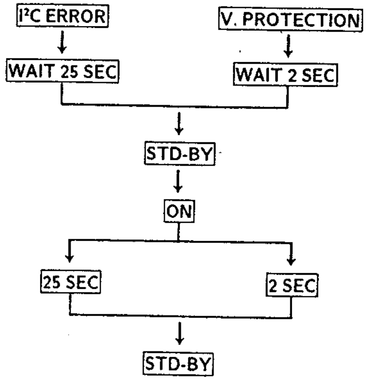
Note : For No. 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA 9145 is switched to Auto Search Mode.

In Test Mode 2 the Menu display is switchable by Speaker-Off button.

4-9. ERROR MESSAGE

Self diagnos system can operates as follows.

- When MP can't get the acknowledge back from the device, LED starts flashing according to the table as attached.



In case of more errors in parallel, the blinking error shows max. Priority according to the error number (e.g. error 2 and error 5 appears together, then LEDs shows error 2) .

TABLE OF ERRORS

ERROR COUNT	IC TYPE	FUNCTION
1	Ⅱ C BUS	SDA low
2	X 24 C 16	EEPROM
3	SDA 3202	Tuner Pll
4	TDA 9145	Colour decoder
5	CXA 1587	RGB/Jungle
6	TDA 6612	Sound processor
7	CXD 2018	V deflection
8	CXA 1545	AV switch
11	SDA 5248	Text
13		V protection

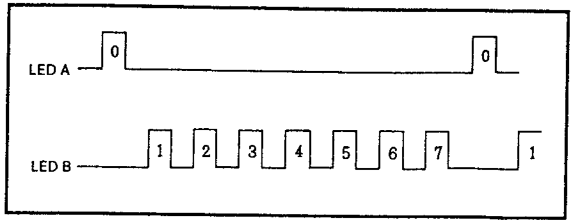
Stand by LED blinking

No IK return

4-10. ERROR Ⅱ C BUS DIAGNOSIS SYSTEM

For all ICs in AE 2 chassis which are necessary to get picture and sound there is a built in error I²C Bus diagnosis system.

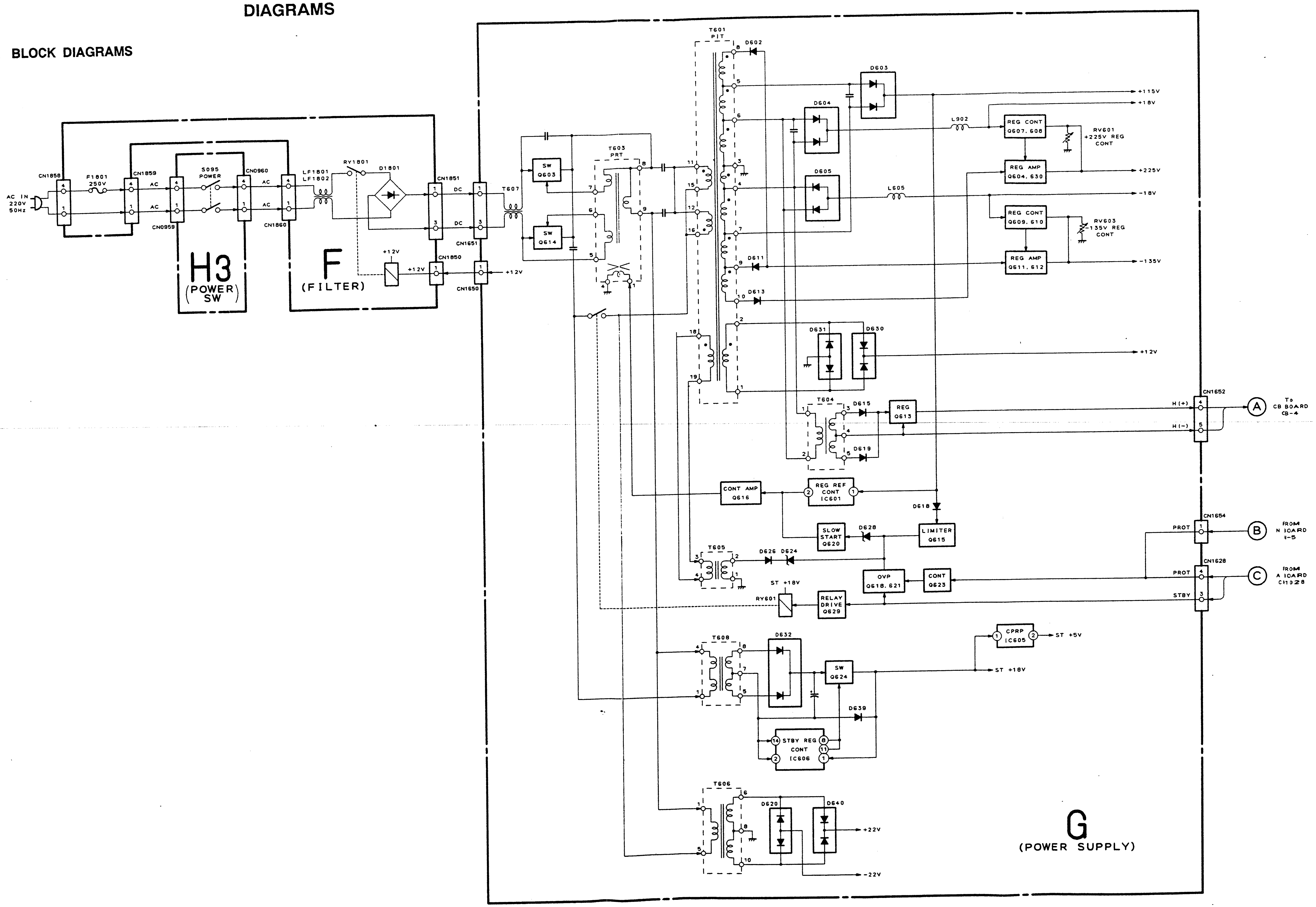
In case of no acknowledge bit, LED A and LED B starts blinking as shown.

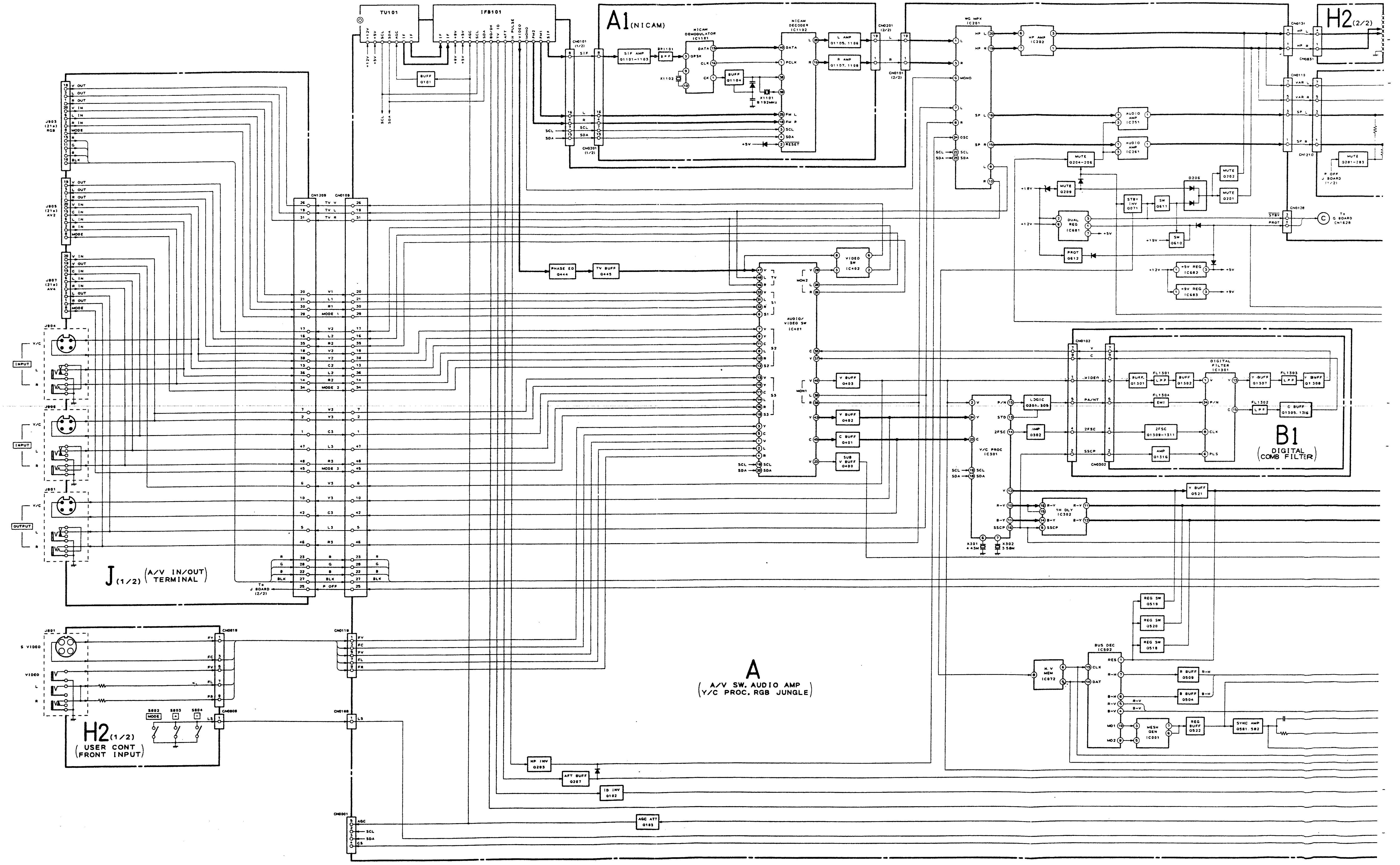


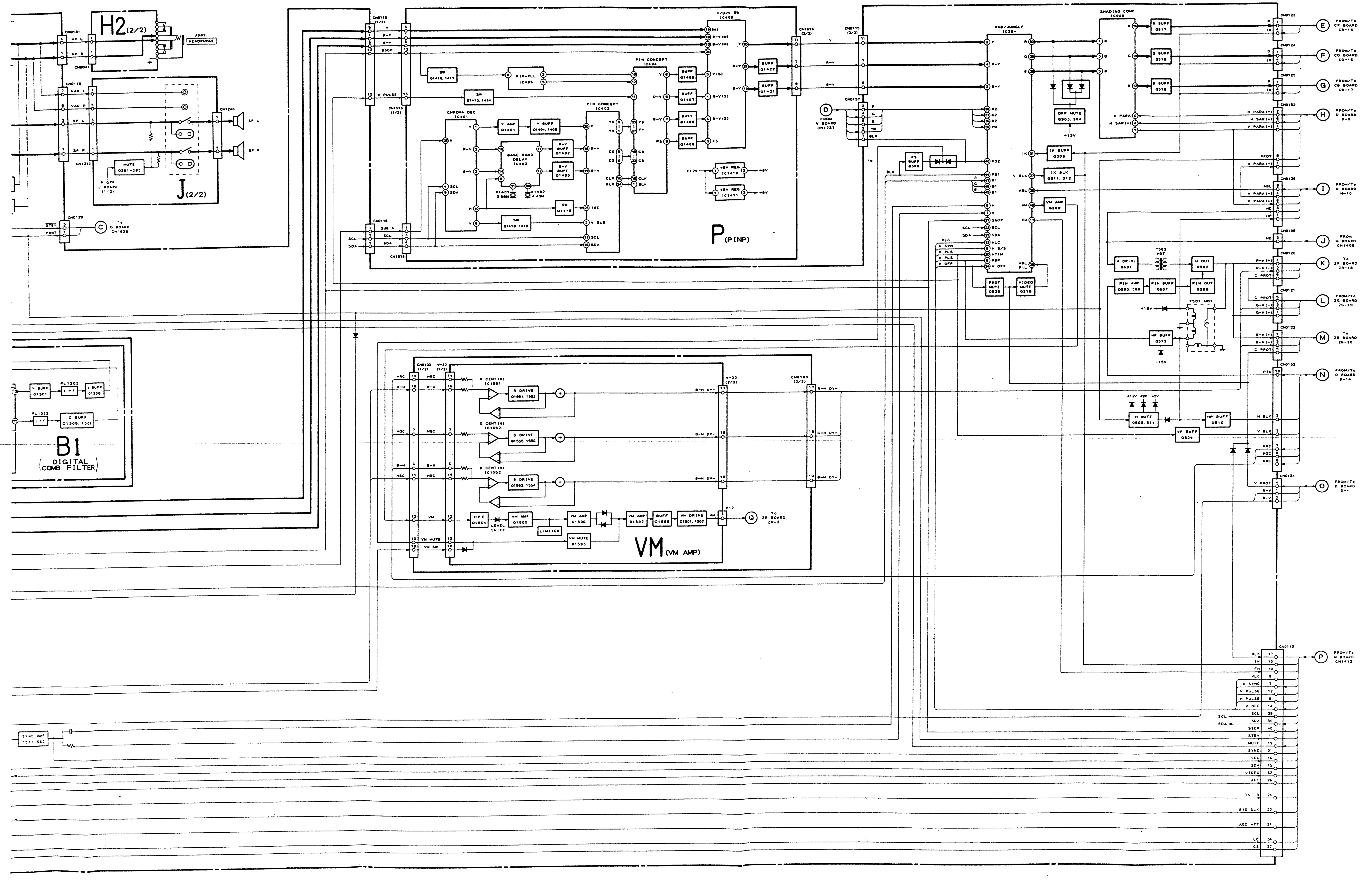
5-1. B

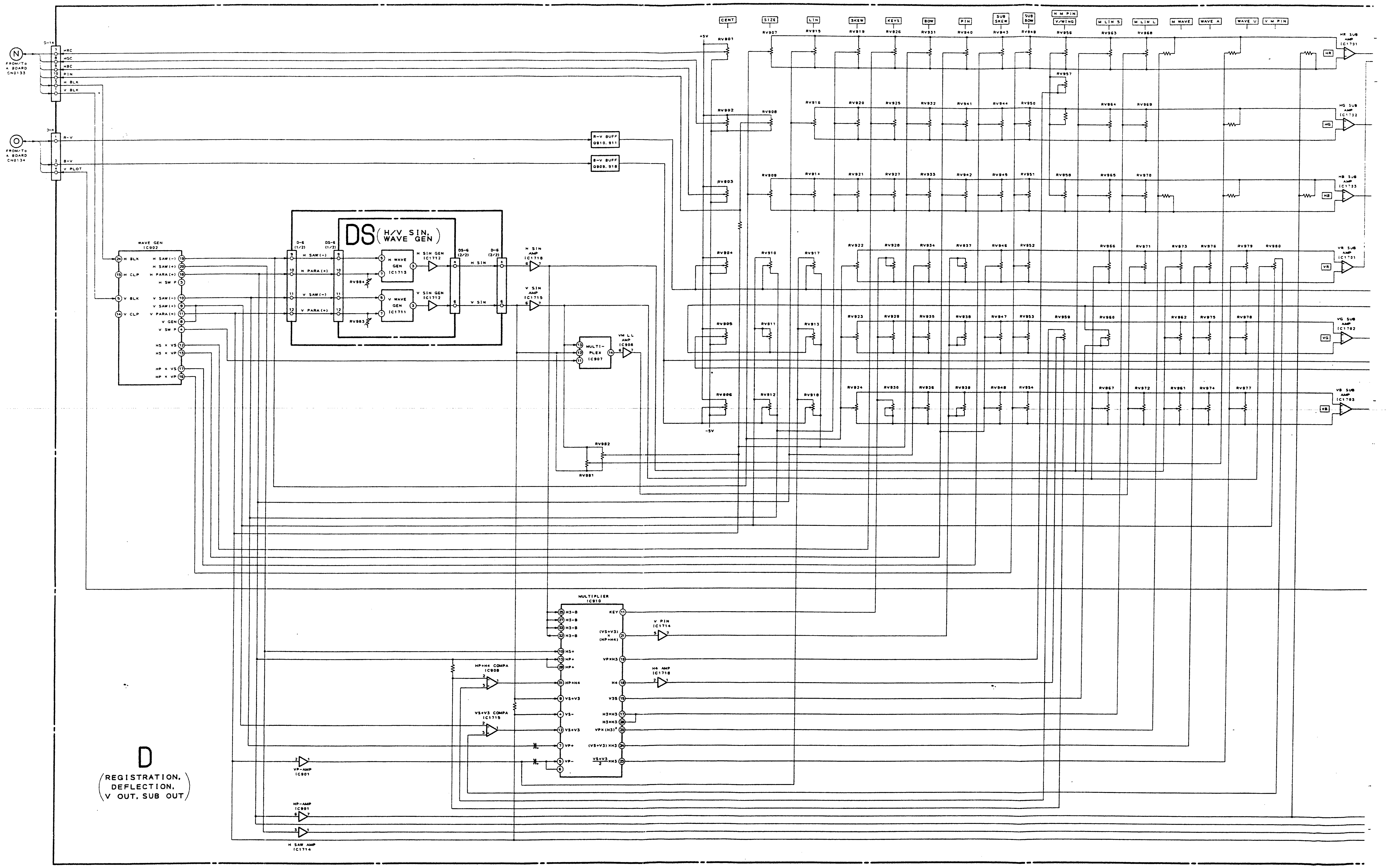
SECTION 5
DIAGRAMS

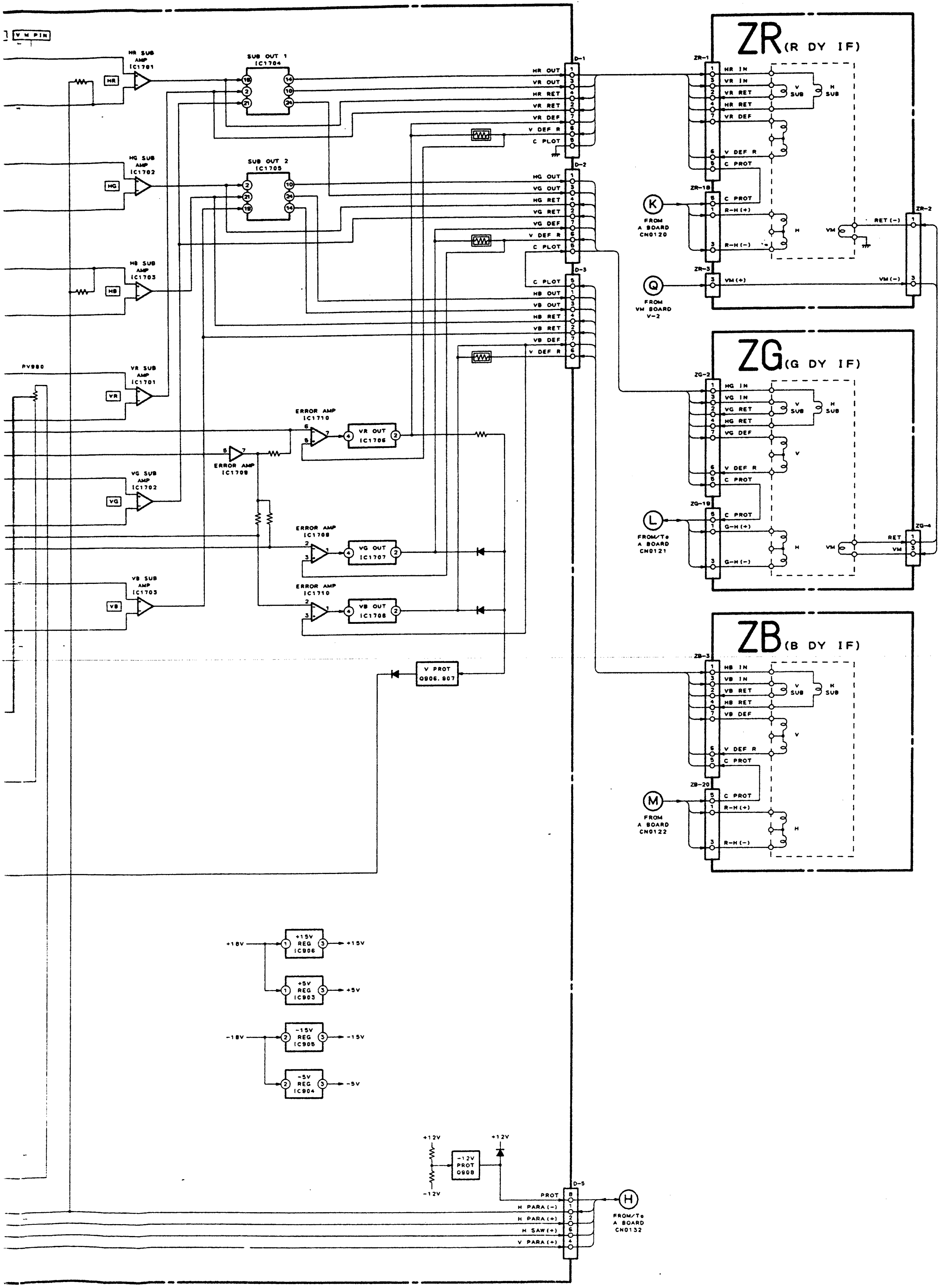
5-1. BLOCK DIAGRAMS

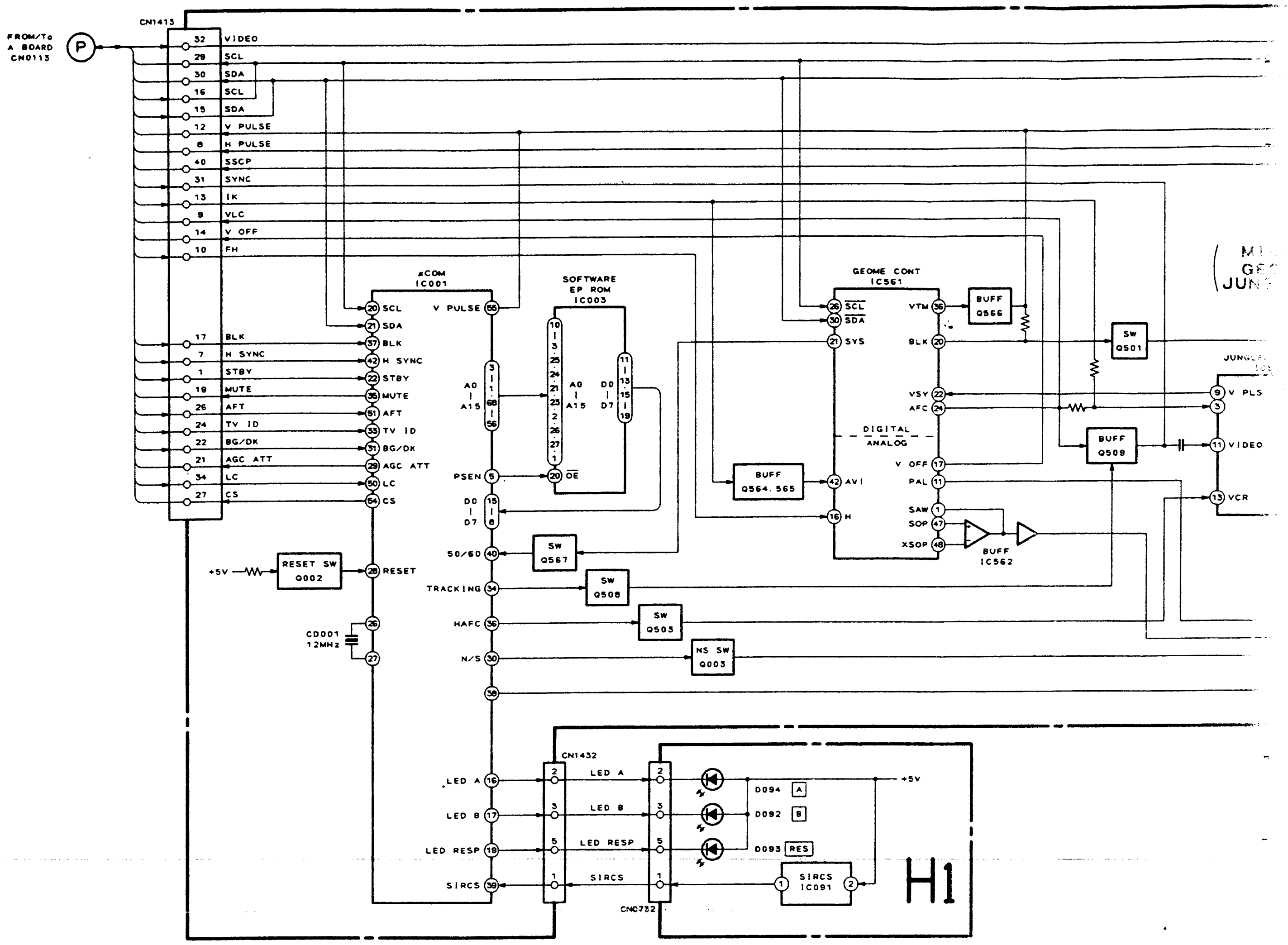

AC IN 220V 50Hz
CN1858
F1801 250V
CN1859
CN0959
S095 POWER
CN0960
AC
LF1801 LF1802
RY1801
D1801
CN1860
CN1851
DC
CN1651
CN1850
CN1650
+12V
H3 (POWER SW)
F (FILTER)
T607
SW Q603
SW Q614
T603 PRT
T601 PIT
D602
D603
D604
D605
L902
REG CONT Q607, 608
RV601 +225V REG CONT
REG AMP Q604, 630
L605
REG CONT Q609, 610
RV603 -135V REG CONT
REG AMP Q611, 612
D611
D613
D631
D630
+115V
+18V
+225V
-18V
-135V
+12V
T604
D615
D619
REG Q613
CN1652
H(+)
H(-)
A
To CB BOARD CB-4
CONT AMP Q616
REG REF CONT IC601
D618
LIMITER Q615
SLOW START Q620
D628
T605
D626
D624
OVP Q618, 621
CONT Q623
CN1654
PROT
B
FROM N BOARD N-5
CN1628
PROT
STBY
C
FROM A BOARD CN1028
ST +18V
RY601
RELAY DRIVE Q629
T608
D632
SW Q624
CPRP IC605
ST +5V
ST +18V
D639
STBY REG CONT IC606
T606
D620
D640
+22V
-22V
G (POWER SUPPLY)

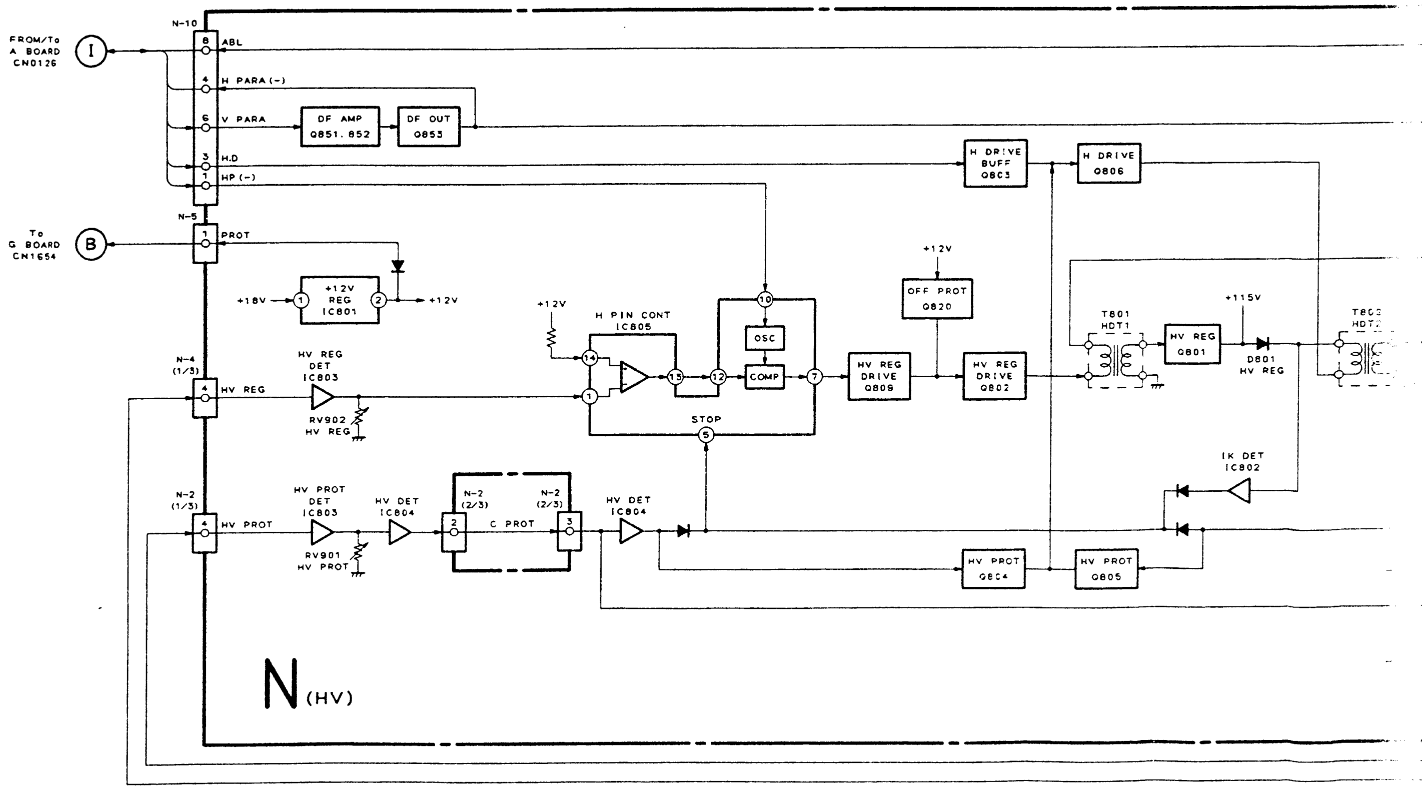

TU101
IFB101
BUFF Q101
A1 (NICAM)
NICAM DEMODULATOR IC1101
SIF AMP Q1101-1103
NICAM DECODER IC1102
L AMP Q1105, 1106
R AMP Q1107, 1108
X1101 8.192MHz
WG MPX IC201
HP AMP IC202
AUDIO AMP IC251
MUTE Q204-206
MUTE Q209
DUAL REG IC681
PROT Q612
STBY INV Q071
+5V REG IC682
+9V REG IC683
MUTE Q202
MUTE Q201
MUTE Q281-283
P OFF J BOARD (1/2)
To G BOARD CN1628
H2 (2/2)
J903 (21p) RGB
J905 (21p) AV2
J907 (21p) AV4
J804
J808
J801
INPUT
OUTPUT
CN1209
CN0108
To J BOARD (2/2)
J (1/2) (A/V IN/OUT TERMINAL)
PHASE EQ Q444
TV BUFF Q445
VIDEO SW IC402
AUDIO/VIDEO SW IC401
V BUFF Q403
Y BUFF Q402
C BUFF Q401
SUB V BUFF Q400
Y/C PROC IC301
LOGIC Q301, 305
AMP Q302
X301 4.43M
X302 3.58M
1H DLY IC302
B1 (DIGITAL COMB FILTER)
DIGITAL FILTER IC1301
Y BUFF Q521
REG SW Q519
REG SW Q520
REG SW Q518
BUS DEC IC502
N.V MEM IC072
R BUFF Q509
B BUFF Q504
MESH GEN IC501
REG BUFF Q522
SYNC AMP Q581 582
S VIDEO
VIDEO
CN0619
CN0119
CN0808
CN0108
CN0001
S802 MODE
S803
S804
H2 (1/2) (USER CONT FRONT INPUT)
A (A/V SW. AUDIO AMP Y/C PROC. RGB JUNGLE)
HP INV Q293
AFT BUFF Q287
ID INV Q102
AGC ATT Q103

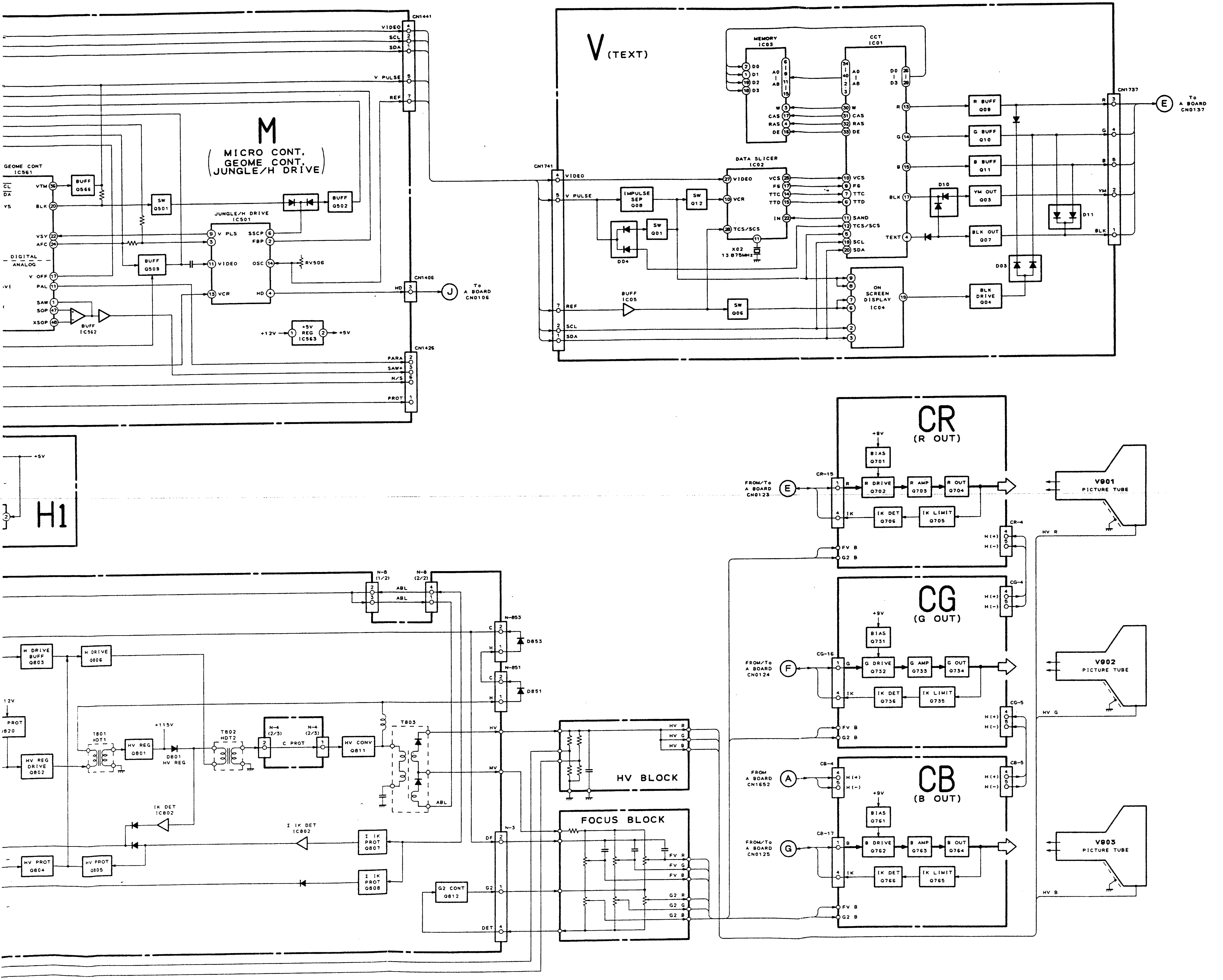

H2(2/2)
HEADPHONE
J(2/2)
SP L
SP R
MUTE Q281-283
B1 (DIGITAL COMB FILTER)
P (PINP)
Y/U/V SW IC406
PIN CONCEPT IC404
PIN CONCEPT IC403
CHROMA DEC IC401
BASE BAND DELAY IC402
PIP-PLL IC405
+9V REG IC1410
+5V REG IC1411
RGB/JUNGLE IC304
SHADING COMP IC809
VM (VM AMP)
R DRIVE Q1551, 1552
G DRIVE Q1555, 1556
B DRIVE Q1553, 1554
LIMITER
VM MUTE Q1503
H DRIVE Q501
H OUT Q502
PIN AMP Q505, 506
PIN BUFF Q507
PIN OUT Q508
HP BUFF Q512
H MUTE Q503, 511
VP BUFF Q524
PROT MUTE Q525
VIDEO MUTE Q310
IK BUFF Q306
IK BLK Q311, 312
VM AMP Q309
FROM/To CR BOARD CR-15
FROM/To CG BOARD CG-16
FROM/To CB BOARD CB-17
FROM/To D BOARD D-5
FROM/To H BOARD N-10
FROM M BOARD CN1406
To ZR BOARD ZR-18
FROM/To ZG BOARD ZG-19
To ZB BOARD ZB-20
FROM/To D BOARD D-14
FROM/To D BOARD D-4
FROM/To M BOARD CN1413
To ZR BOARD ZR-3
FROM V BOARD CN1737
To G BOARD CN1626
SYNC AMP Q581 582


N
FROM/To A BOARD CN0133
D-14
7 HRC
8 HGC
9 HBC
10 PIN
3 H BLK
1 V BLK
O
FROM/To A BOARD CN0134
D-4
1 R-V
3 B-V
4 V PLOT
R-V BUFF Q910, 911
B-V BUFF Q909, 918
WAVE GEN IC902
24 H BLK
15 H CLP
5 V BLK
14 V CLP
H SAW(−) 19
H SAW(+) 20
H PARA(+) 18
H SW P 3
V SAW(−) 10
V SAW(+) 9
V PARA(+) 11
V GEN 8
V SW P 4
HS × VS 12
HS × VP 13
HP × VS 17
HP × VP 16
DS (H/V SIN, WAVE GEN)
D-6 (1/2)
DS-6 (1/2)
H SAW(−)
H PARA(+)
V SAW(−)
V PARA(+)
RV984
RV983
H WAVE GEN IC1713
V WAVE GEN IC1711
H SIN GEN IC1712
V SIN GEN IC1712
DS-6 (2/2)
D-6 (2/2)
H SIN
V SIN
H SIN AMP IC1718
V SIN AMP IC1715
MULTI-PLEX IC907
VM LL AMP IC908
RV982
RV981
CENT
SIZE
LIN
SKEW
KEYS
BOW
PIN
SUB SKEW
SUB BOW
H M PIN
V/WING
M LIN S
M LIN L
M WAVE
WAVE A
WAVE U
V M PIN
+5V
−5V
RV901 RV907 RV915 RV919 RV926 RV931 RV940 RV943 RV948 RV956 RV963 RV968
RV957
RV902 RV908 RV916 RV920 RV925 RV932 RV941 RV944 RV950 RV964 RV969
RV903 RV909 RV914 RV921 RV927 RV933 RV942 RV945 RV951 RV958 RV965 RV970
RV904 RV910 RV917 RV922 RV928 RV934 RV937 RV946 RV952 RV966 RV971 RV973 RV976 RV979 RV980
RV905 RV911 RV913 RV923 RV929 RV935 RV938 RV947 RV953 RV959 RV960 RV962 RV975 RV978
RV906 RV912 RV918 RV924 RV930 RV936 RV939 RV948 RV954 RV967 RV972 RV961 RV974 RV977
HR SUB AMP IC1731
HG SUB AMP IC1732
HB SUB AMP IC1733
VR SUB AMP IC1701
VG SUB AMP IC1702
VB SUB AMP IC1703
HR
HG
HB
VR
VG
VB
MULTIPLIER IC910
25 H3−B
27 H3−B
33 H3−B
32 H3−B
10 HS+
13 HP+
29 HP+
31 HP+H4
9 VS+V3
4 VS−
12 VS+V3
7 VP+
5 VP−
6
KEY 11
(VS+V3) × (HP+H4) 21
VP×H3 19
H4 18
V3S 15
H3×H3 17
H3×H3 28
VP×(H3)² 20
(VS+V3)×H3 24
(VS+V3)/2 ×H3 23
V PIN IC1714
H4 AMP IC1718
HP+H4 COMPA IC908
VS+V3 COMPA IC1715
VP-AMP IC901
HP-AMP IC901
H SAW AMP IC1714
D
(REGISTRATION, DEFLECTION, V OUT, SUB OUT)

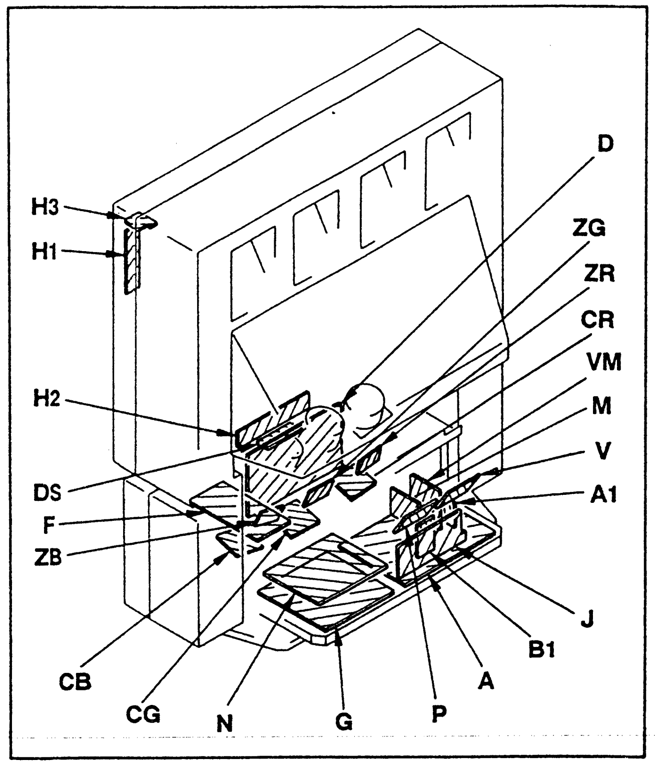

VM PIN
HR SUB AMP IC1701
HR
SUB OUT 1 IC1704
HG SUB AMP IC1702
HG
SUB OUT 2 IC1705
HB SUB AMP IC1703
HB
RV980
VR SUB AMP IC1701
VR
VG SUB AMP IC1702
VG
VB SUB AMP IC1703
VB
ERROR AMP IC1710
VR OUT IC1706
ERROR AMP IC1709
ERROR AMP IC1708
VG OUT IC1707
ERROR AMP IC1710
VB OUT IC1708
V PROT Q906, 907
D-1
HR OUT
VR OUT
HR RET
VR RET
VR DEF
V DEF R
C PLOT
D-2
HG OUT
VG OUT
HG RET
VG RET
VG DEF
V DEF R
C PLOT
D-3
C PLOT
HB OUT
VB OUT
HB RET
VB RET
VB DEF
V DEF R
ZR (R DY IF)
ZR-1
HR IN
VR IN
VR RET
HR RET
VR DEF
V DEF R
C PROT
V SUB
H SUB
ZR-18
C PROT
R-H (+)
R-H (-)
H
VM
RET (-)
ZR-2
ZR-3
VM (+)
VM (-)
K
FROM A BOARD CN0120
Q
FROM VM BOARD V-2
ZG (G DY IF)
ZG-2
HG IN
VG IN
VG RET
HG RET
VG DEF
V DEF R
C PROT
V SUB
H SUB
V
ZG-19
C PROT
G-H (+)
G-H (-)
H
VM
RET
VM
ZG-4
L
FROM/To A BOARD CN0121
ZB (B DY IF)
ZB-3
HB IN
VB IN
VB RET
HB RET
VB DEF
V DEF R
C PROT
V SUB
H SUB
V
ZB-20
C PROT
R-H (+)
R-H (-)
H
M
FROM A BOARD CN0122
+18V
+15V REG IC906
+15V
+5V REG IC903
+5V
-18V
-15V REG IC905
-15V
-5V REG IC904
-5V
+12V
-12V PROT Q908
-12V
+12V
D-5
PROT
H PARA (-)
H PARA (+)
H SAW (+)
V PARA (+)
H
FROM/To A BOARD CN0132


FROM/To
A BOARD
CN0113
P
CN1413
32 VIDEO
29 SCL
30 SDA
16 SCL
15 SDA
12 V PULSE
8 H PULSE
40 SSCP
31 SYNC
13 IK
9 VLC
14 V OFF
10 FH
17 BLK
7 H SYNC
1 STBY
19 MUTE
26 AFT
24 TV ID
22 BG/DK
21 AGC ATT
34 LC
27 CS
μCOM
IC001
20 SCL
21 SDA
37 BLK
42 H SYNC
22 STBY
35 MUTE
51 AFT
33 TV ID
31 BG/DK
29 AGC ATT
50 LC
54 CS
V PULSE 56
A0
A15
PSEN 5
D0
D7
50/60 40
TRACKING 34
HAFC 36
N/S 30
38
28 RESET
26
27
CD001
12MHz
+5V
RESET SW
Q002
SOFTWARE
EP ROM
IC003
A0
A15
D0
D7
20 OE
SW
Q567
SW
Q508
SW
Q503
NS SW
Q003
GEOME CONT
IC561
26 SCL
30 SDA
21 SYS
VTM 36
BLK 20
VSY 22
AFC 24
DIGITAL
ANALOG
V OFF 17
PAL 11
42 AVI
16 H
SAW 1
SOP 47
XSOP 48
BUFF
Q566
SW
Q501
BUFF
Q564. 565
BUFF
Q508
BUFF
IC562
JUNGLE
9 V PLS
3
11 VIDEO
13 VCR
CN1432
LED A 16
LED B 17
LED RESP 19
SIRCS 38
LED A
LED B
LED RESP
SIRCS
D094 A
D092 B
D093 RES
+5V
SIRCS
IC091
CN0732
H1


FROM/To
A BOARD
CN0126
I
N-10
8 ABL
4 H PARA (-)
6 V PARA
3 H.D
HP (-)
DF AMP
Q851. 852
DF OUT
Q853
H DRIVE
BUFF
Q803
H DRIVE
Q806
To
G BOARD
CN1654
B
N-5
1 PROT
+18V
+12V
REG
IC801
+12V
N-4
(1/3)
4 HV REG
HV REG
DET
IC803
RV902
HV REG
+12V
H PIN CONT
IC805
14
1
13
12
10
OSC
COMP
7
STOP
5
HV REG
DRIVE
Q809
+12V
OFF PROT
Q820
HV REG
DRIVE
Q802
T801
HDT1
HV REG
Q801
+115V
D801
HV REG
T802
HDT2
N-2
(1/3)
4 HV PROT
HV PROT
DET
IC803
RV901
HV PROT
HV DET
IC804
N-2
(2/3)
2
C PROT
N-2
(2/3)
3
HV DET
IC804
IK DET
IC802
HV PROT
Q804
HV PROT
Q805
N (HV)


M
MICRO CONT.
GEOME CONT.
JUNGLE/H DRIVE
GEOME CONT IC561
BUFF Q566
SW Q501
BUFF Q502
JUNGLE/H DRIVE IC501
BUFF Q509
BUFF IC562
+5V REG IC563
RV506
CN1441
VIDEO
SCL
SDA
V PULSE
REF
CN1406
CN1426
PARA
SAW+
N/S
PROT
To A BOARD CN0106
J
V (TEXT)
MEMORY IC03
CCT IC01
DATA SLICER IC02
IMPULSE SEP Q08
SW Q12
SW Q01
D04
X02 13.875MHz
BUFF IC05
SW Q06
ON SCREEN DISPLAY IC04
R BUFF Q09
G BUFF Q10
B BUFF Q11
YM OUT Q03
BLK OUT Q07
BLK DRIVE Q04
D10
D11
D03
CN1741
CN1737
To A BOARD CN0137
E
H1
+5V
N-8 (1/2)
N-8 (2/2)
ABL
N-853
N-851
D853
D851
H DRIVE BUFF Q803
H DRIVE Q806
PROT Q820
HV REG DRIVE Q802
T801 HDT1
HV REG Q801
+115V
D801 HV REG
T802 HDT2
N-4 (2/3)
C PROT
HV CONV Q811
T803
IK DET IC802
I IK DET IC802
I IK PROT Q807
I IK PROT Q808
HV PROT Q804
HV PROT Q805
G2 CONT Q812
N-3
DF
G2
DET
HV
MV
HV BLOCK
HV R
HV G
HV B
FOCUS BLOCK
FV R
FV G
FV B
G2 R
G2 G
G2 B
CR
(R OUT)
BIAS Q701
R DRIVE Q702
R AMP Q703
R OUT Q704
IK DET Q706
IK LIMIT Q705
CR-15
CR-4
FROM/To A BOARD CN0123
CG
(G OUT)
BIAS Q731
G DRIVE Q732
G AMP Q733
G OUT Q734
IK DET Q736
IK LIMIT Q735
CG-16
CG-4
CG-5
FROM/To A BOARD CN0124
F
CB
(B OUT)
BIAS Q761
B DRIVE Q762
B AMP Q763
B OUT Q764
IK DET Q766
IK LIMIT Q765
CB-17
CB-4
CB-5
FROM A BOARD CN1652
A
FROM/To A BOARD CN0125
G
+9V
FV B
G2 B
H(+)
H(-)
V901 PICTURE TUBE
V902 PICTURE TUBE
V903 PICTURE TUBE
HV R
HV G
HV B

5-2. CIRCUIT BOARDS LOCATION


D
H3
H1
ZG
ZR
CR
VM
M
V
A1
H2
DS
F
ZB
J
B1
A
CB
CG
N
G
P

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  kΩ =1000Ω , MΩ =1000KΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

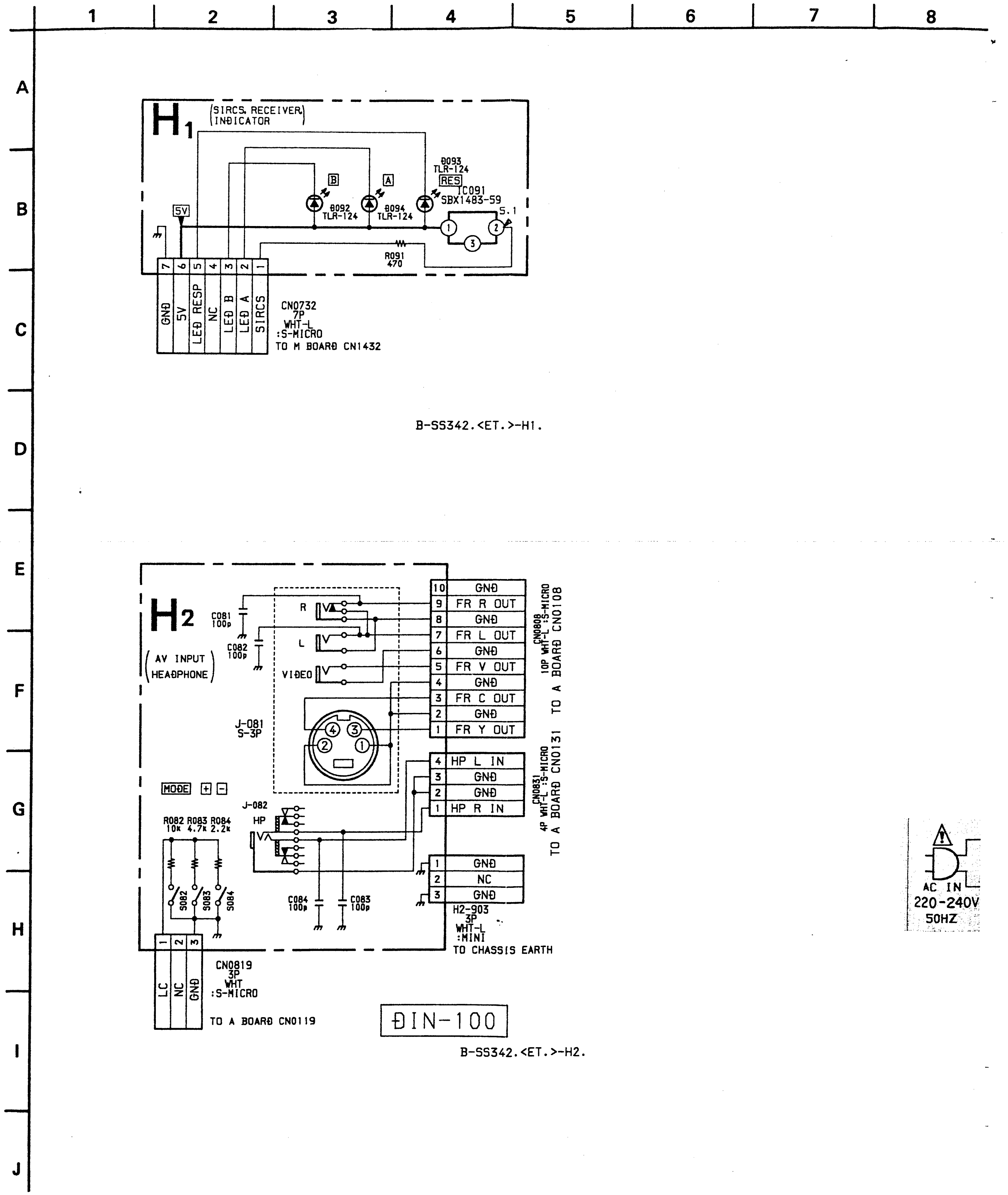
  Pitch: 5 mm
  Rating electrical power ¼ W
- ⊞ : nonflammable resistor.
- △ : internal component.
- ☐ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Reading are taken with a color-bar signal input.
  no mark : PAL
  ( ): SECAM
  < >: NTSC 3.58
  ⟨ ⟩: NTSC 4.43
- Readings are taken with a 10MΩ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- * : Can not be measured.
- Circled numbers are waveform references.
- ▬▬ : B+ bus.
- ▬ ▬ ▬ : B – bus.
- ▨ : signal path.

Reference information

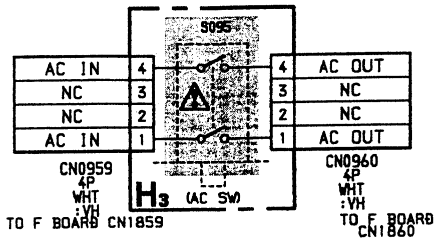
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

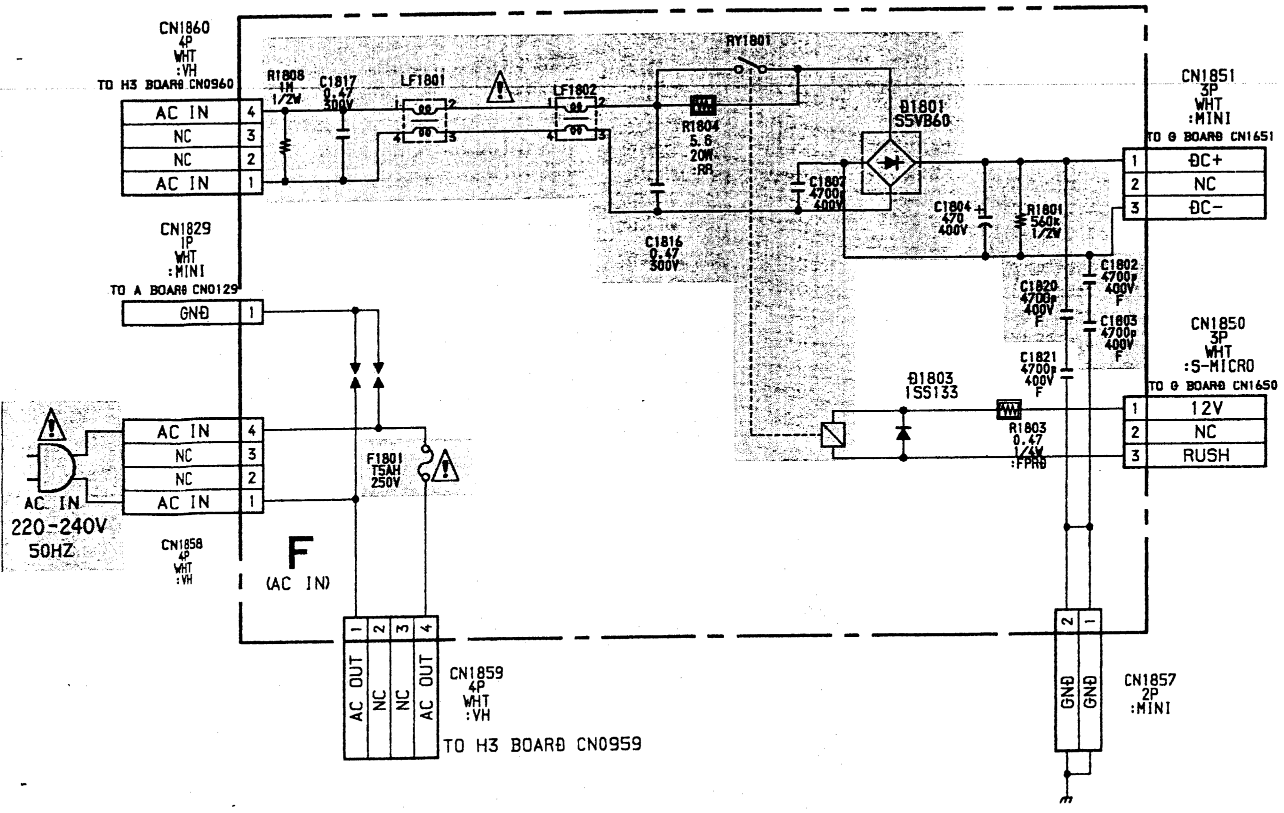
(1) Schematic Diagrams of H1, H2, H3 and F Boards


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
H1
SIRCS, RECEIVER INDICATOR
5V
B
A
RES
D092 TLR-124
D094 TLR-124
D093 TLR-124
IC091 SBX1483-59
S.1
R091 470
7 GND
6 5V
5 LED RESP
4 NC
3 LED B
2 LED A
1 SIRCS
CN0732 7P WHT-L :S-MICRO
TO M BOARD CN1432
B-SS342.<ET.>-H1.
H2
AV INPUT HEADPHONE
C081 100p
C082 100p
R
L
VIDEO
J-081 S-3P
MODE
+
−
J-082 HP
R082 10k
R083 4.7k
R084 2.2k
S082
S083
S084
C084 100p
C083 100p
10 GND
9 FR R OUT
8 GND
7 FR L OUT
6 GND
5 FR V OUT
4 GND
3 FR C OUT
2 GND
1 FR Y OUT
CN0808 10P WHT-L :S-MICRO TO A BOARD CN0108
4 HP L IN
3 GND
2 GND
1 HP R IN
CN0831 4P WHT-L :S-MICRO TO A BOARD CN0131
1 GND
2 NC
3 GND
H2-903 3P WHT-L :MINI
TO CHASSIS EARTH
1 LC
2 NC
3 GND
CN0819 3P WHT :S-MICRO
TO A BOARD CN0119
DIN-100
B-SS342.<ET.>-H2.
AC IN
220-240V
50HZ

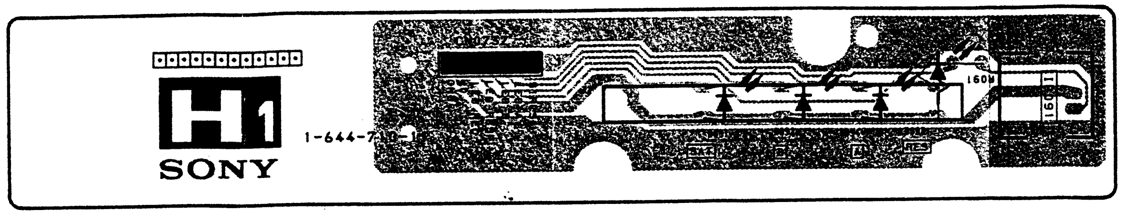
H1 [SIRCS, RECEIVER, INDICATOR] **H2** [AV INPUT HEADPHONE] **H3** [AC SW] **F** [AC IN]


S095
AC IN
NC
NC
AC IN
4
3
2
1
AC OUT
NC
NC
AC OUT
CN0959
4P
WHT
:VH
TO F BOARD CN1859
H3 (AC SW)
CN0960
4P
WHT
:VH
TO F BOARD CN1860

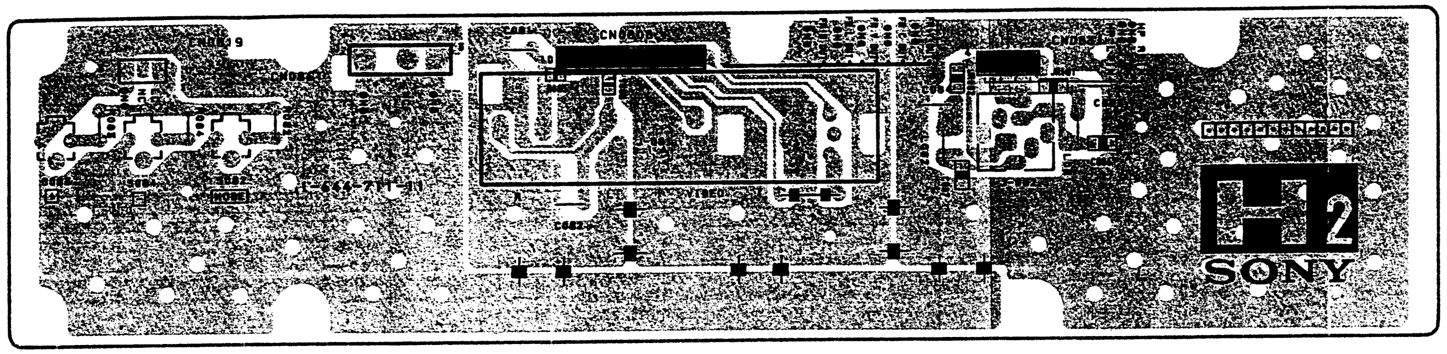
B-SS342.<ET.>-H3.


CN1860
4P
WHT
:VH
TO H3 BOARD CN0960
AC IN
NC
NC
AC IN
R1808
1M
1/2W
C1817
0.47
300V
LF1801
LF1802
RY1801
R1804
5.6
20W
:RB
D1801
S5VB60
C1816
0.47
300V
C1807
4700p
400V
C1804
470
400V
R1801
560k
1/2W
C1820
4700p
400V
F
C1802
4700p
400V
F
C1803
4700p
400V
F
C1821
4700p
400V
F
D1803
1SS133
R1803
0.47
1/4W
:FPRD
CN1851
3P
WHT
:MINI
TO G BOARD CN1651
DC+
NC
DC-
CN1850
3P
WHT
:S-MICRO
TO G BOARD CN1650
12V
NC
RUSH
CN1829
1P
WHT
:MINI
TO A BOARD CN0129
GND
AC IN
220-240V
50HZ
F1801
T5AH
250V
CN1858
4P
WHT
:VH
F
(AC IN)
AC OUT
NC
NC
AC OUT
CN1859
4P
WHT
:VH
TO H3 BOARD CN0959
GND
GND
CN1857
2P
:MINI

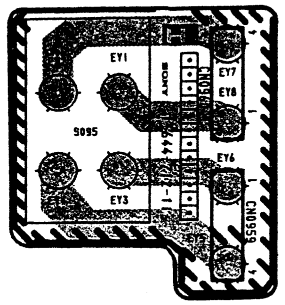
– H1 Board –


H1
SONY
1-644-7

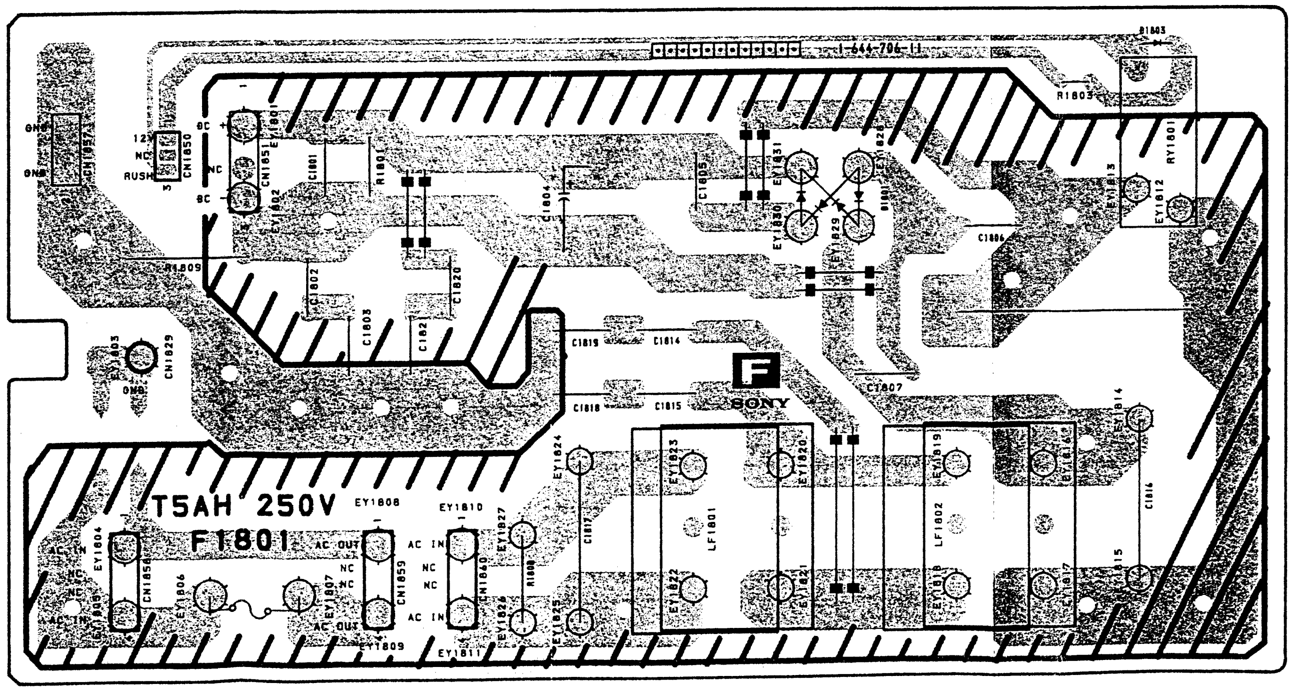
– H2 Board –



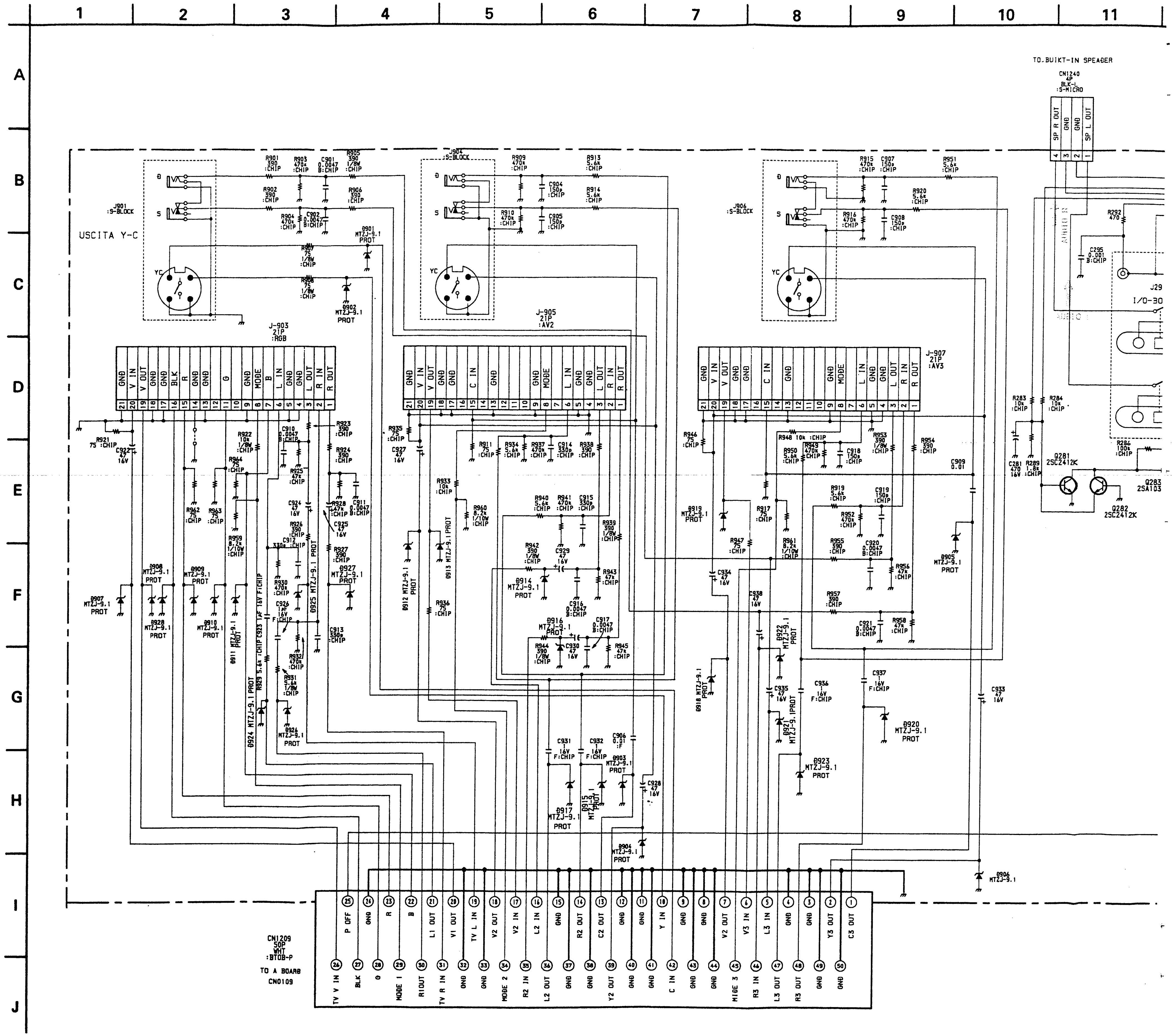
– H3 Board –

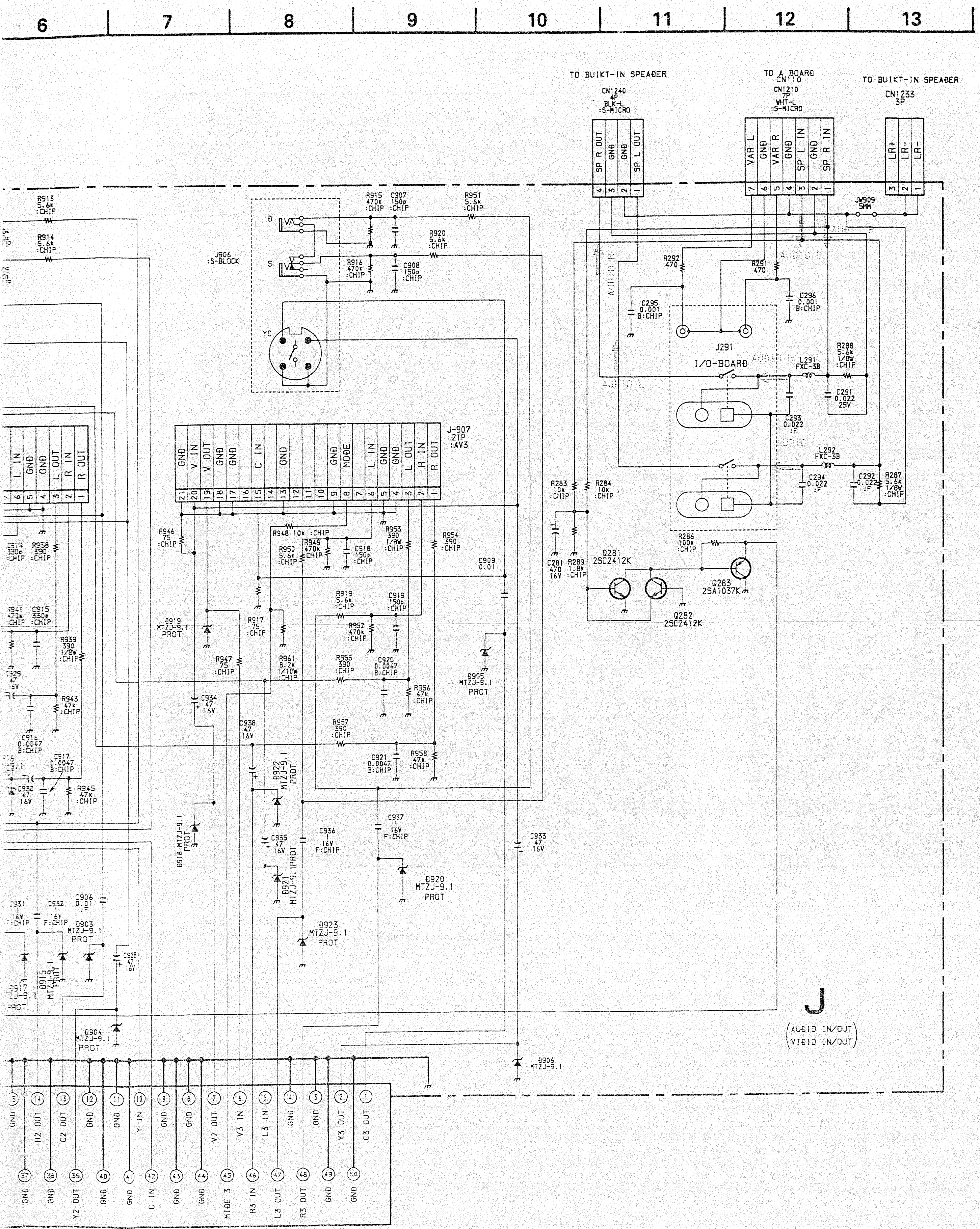

EY1
EY7
EY8
S095
EY4
EY3
CN0959

– F Board –


1-644-706-11
R1803
RY1801
F
SONY
T5AH 250V
F1801
AC IN
NC
NC
AC OUT
GND
12V
NC
RUSH
DC
DC
LF1801
LF1802

(2) Schematic Diagram of J Board

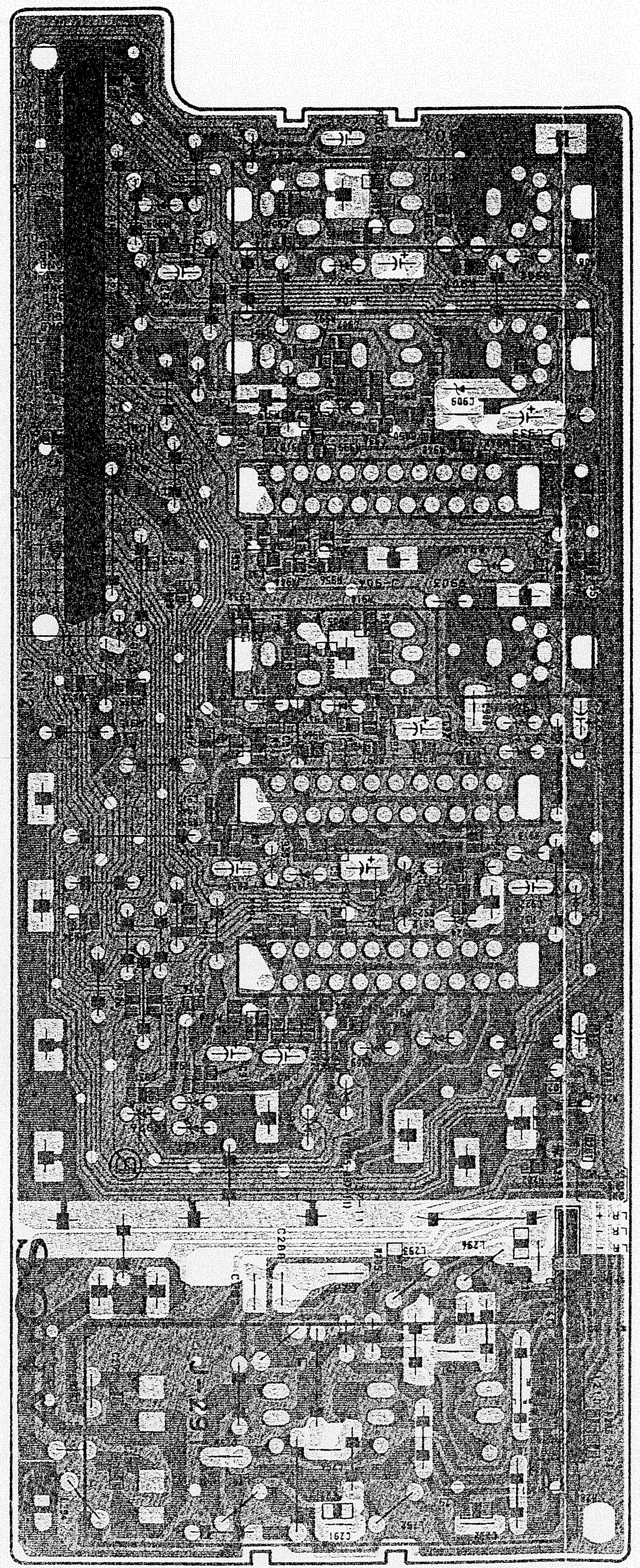

1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
TO BUIKT-IN SPEAGER
CN1240 4P BLK-L :S-MICRO
SP R OUT
GND
GND
SP L OUT
USCITA Y-C
J901 :S-BLOCK
J904 :S-BLOCK
J906 :S-BLOCK
YC
J-903 21P :RGB
J-905 21P :AV2
J-907 21P :AV3
I/O-30
J29
Q281 2SC2412K
Q282 2SC2412K
Q283 2SA103
CN1209 50P WHT :BTOB-P
TO A BOARB CN0109
P OFF
GND
R
B
L1 OUT
V1 OUT
TV L IN
V2 OUT
V2 IN
L2 IN
GND
R2 OUT
C2 OUT
GND
GND
Y IN
GND
GND
V2 OUT
V3 IN
L3 IN
GND
GND
Y3 OUT
C3 OUT
TV V IN
BLK
G
MODE 1
RIOUT
TV R IN
GND
GND
MODE 2
R2 IN
L2 OUT
GND
Y2 OUT
GND
GND
GND
C IN
GND
GND
MIDE 3
R3 IN
L3 OUT
R3 OUT
GND
GND


6
7
8
9
10
11
12
13
TO BUIKT-IN SPEAGER
CN1240
4P
BLK-L
:S-MICRO
SP R OUT
GND
GND
SP L OUT
TO A BOARD
CN110
CN1210
7P
WHT-L
:S-MICRO
VAR L
GND
VAR R
GND
SP L IN
GND
SP R IN
TO BUIKT-IN SPEAGER
CN1233
3P
LR+
LR-
LR-
JW909
5MM
R913
5.6k
:CHIP
R914
5.6k
:CHIP
J906
:S-BLOCK
YC
R915
470k
:CHIP
C907
150p
:CHIP
R951
5.6k
:CHIP
R920
5.6k
:CHIP
R916
470k
:CHIP
C908
150p
:CHIP
R292
470
R291
470
C295
0.001
B:CHIP
C296
0.001
B:CHIP
J291
I/O-BOARD
L291
FXC-3B
R288
5.6k
1/8W
:CHIP
C291
0.022
25V
C293
0.022
:F
L292
FXC-3B
C294
0.022
:F
C292
0.022
:F
R287
5.6k
1/8W
:CHIP
J-907
21P
:AV3
GND
V IN
V OUT
GND
GND
C IN
GND
MODE
L IN
GND
L OUT
R IN
R OUT
L IN
GND
L OUT
R IN
R OUT
R283
10k
:CHIP
R284
10k
:CHIP
R286
100k
:CHIP
Q281
2SC2412K
Q282
2SC2412K
Q283
2SA1037K
C281
470
16V
R289
1.8k
:CHIP
R946
75
:CHIP
R948 10k :CHIP
R953
390
1/8W
:CHIP
R954
390
:CHIP
C909
0.01
R938
390
:CHIP
R950
5.6k
:CHIP
R945
470k
:CHIP
C918
150p
:CHIP
R919
5.6k
:CHIP
C919
150p
:CHIP
R952
470k
:CHIP
C915
330p
:CHIP
R939
390
1/8W
:CHIP
D919
MTZJ-9.1
PROT
R917
75
:CHIP
R947
75
:CHIP
R961
8.2k
1/10W
:CHIP
R955
390
:CHIP
C920
0.0047
B:CHIP
R956
47k
:CHIP
D905
MTZJ-9.1
PROT
R943
47k
:CHIP
C934
47
16V
C938
47
16V
R957
390
:CHIP
C921
0.0047
B:CHIP
R958
47k
:CHIP
C917
0.0047
B:CHIP
R945
47k
:CHIP
D922
MTZJ-9.1
PROT
D918 MTZJ-9.1
PROT
C935
47
16V
C936
16V
F:CHIP
C937
16V
F:CHIP
C933
47
16V
D920
MTZJ-9.1
PROT
D921
MTZJ-9.1
PROT
C906
0.01
:F
C932
16V
F:CHIP
D903
MTZJ-9.1
PROT
D923
MTZJ-9.1
PROT
D915
MTZJ-9.1
PROT
D904
MTZJ-9.1
PROT
D906
MTZJ-9.1
J
AUDIO IN/OUT
VIDEO IN/OUT
GND
R2 OUT
C2 OUT
GND
GND
Y IN
GND
GND
V2 OUT
V3 IN
L3 IN
GND
GND
Y3 OUT
C3 OUT
GND
GND
Y2 OUT
GND
C IN
GND
GND
MIDE 3
R3 IN
L3 OUT
R3 OUT
GND
GND

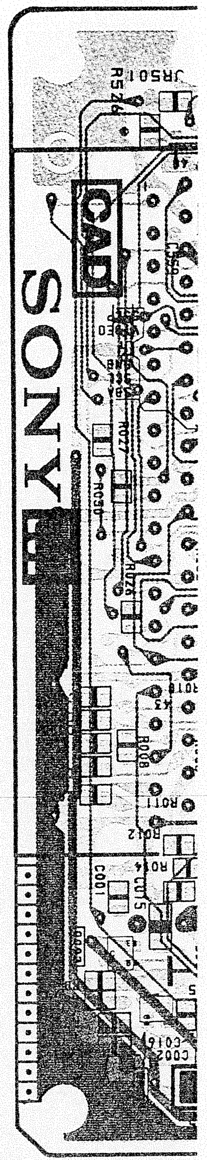
J [AUDIO IN/OUT
VIDEO IN/OUT]

M [MICRO CONTROLLER,
GEOMETRIC CONTROLLER,
JUNGLE, H-DRIVE]

– J Board –



– M Board (Con

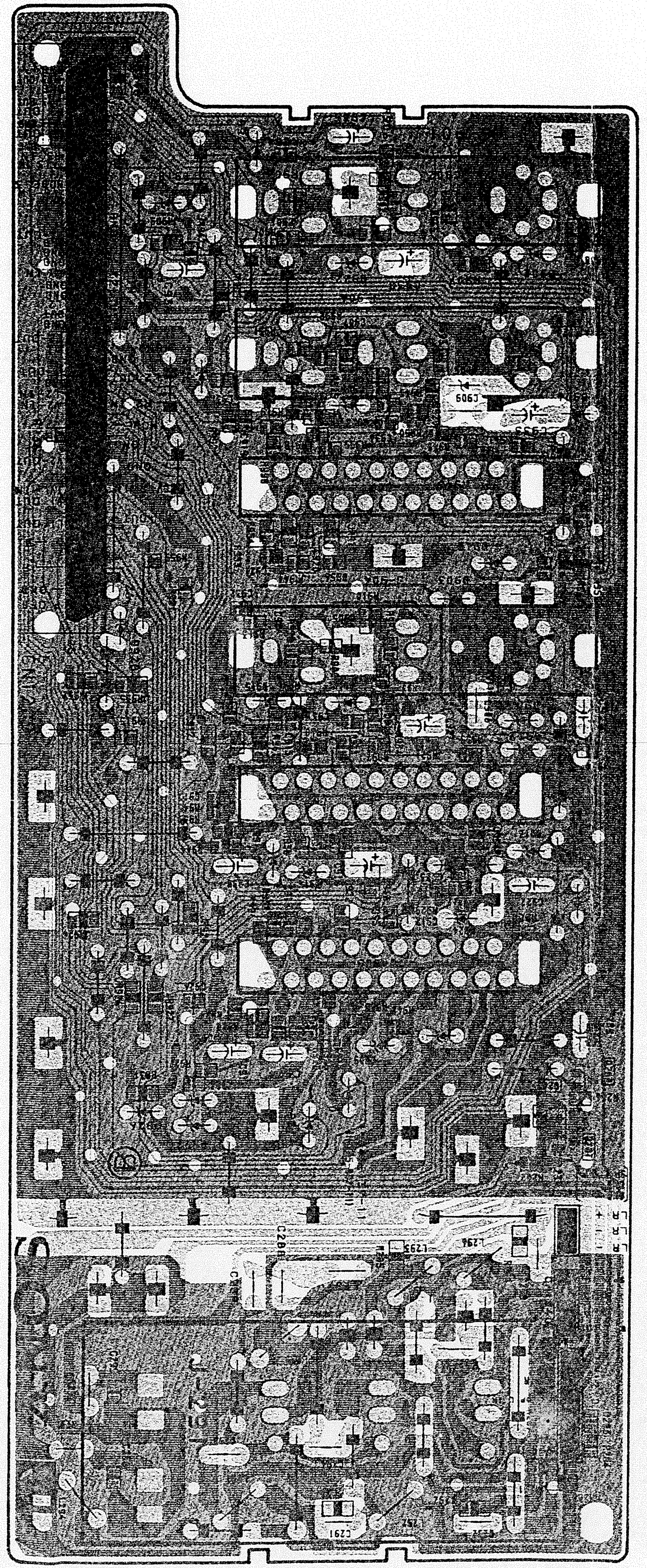


▨ : Pattern from the side which enables seeing.
▨ : Pattern of the rear side.

J [AUDIO IN/OUT
VIDEO IN/OUT]

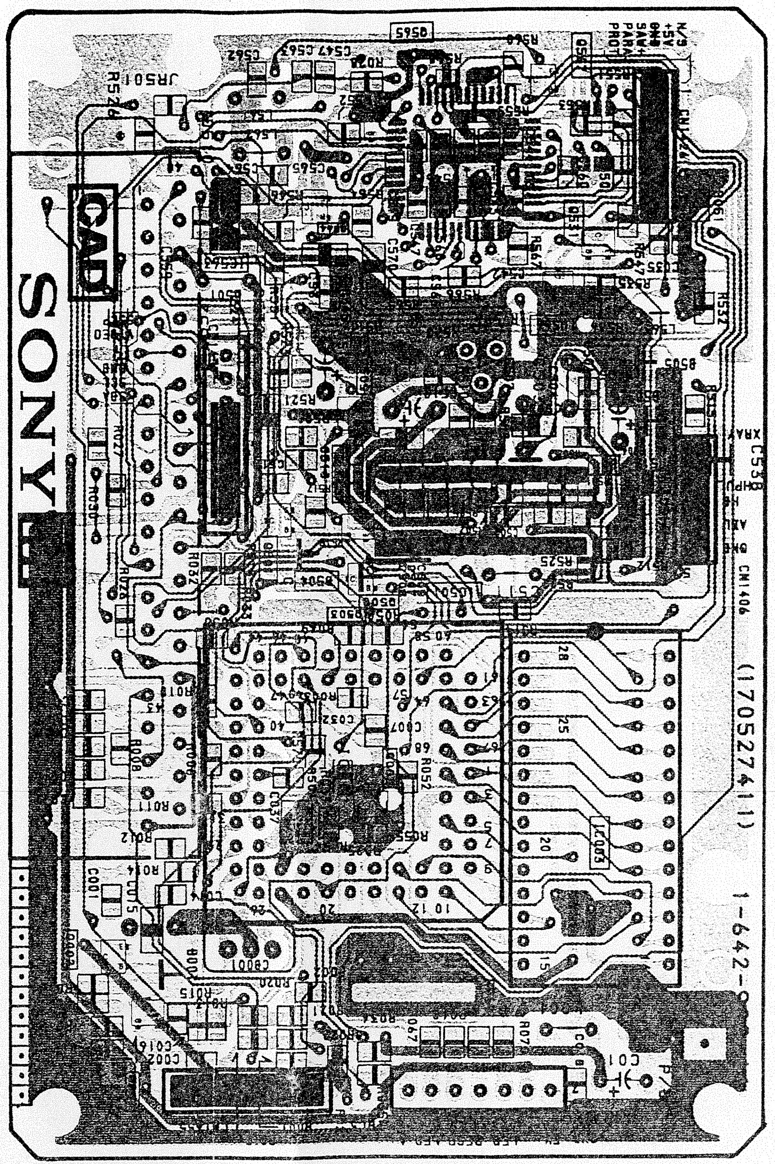
M [MICRO CONTROLLER,
GEOMETRIC CONTROLLER,
JUNGLE, H-DRIVE]

– J Board –

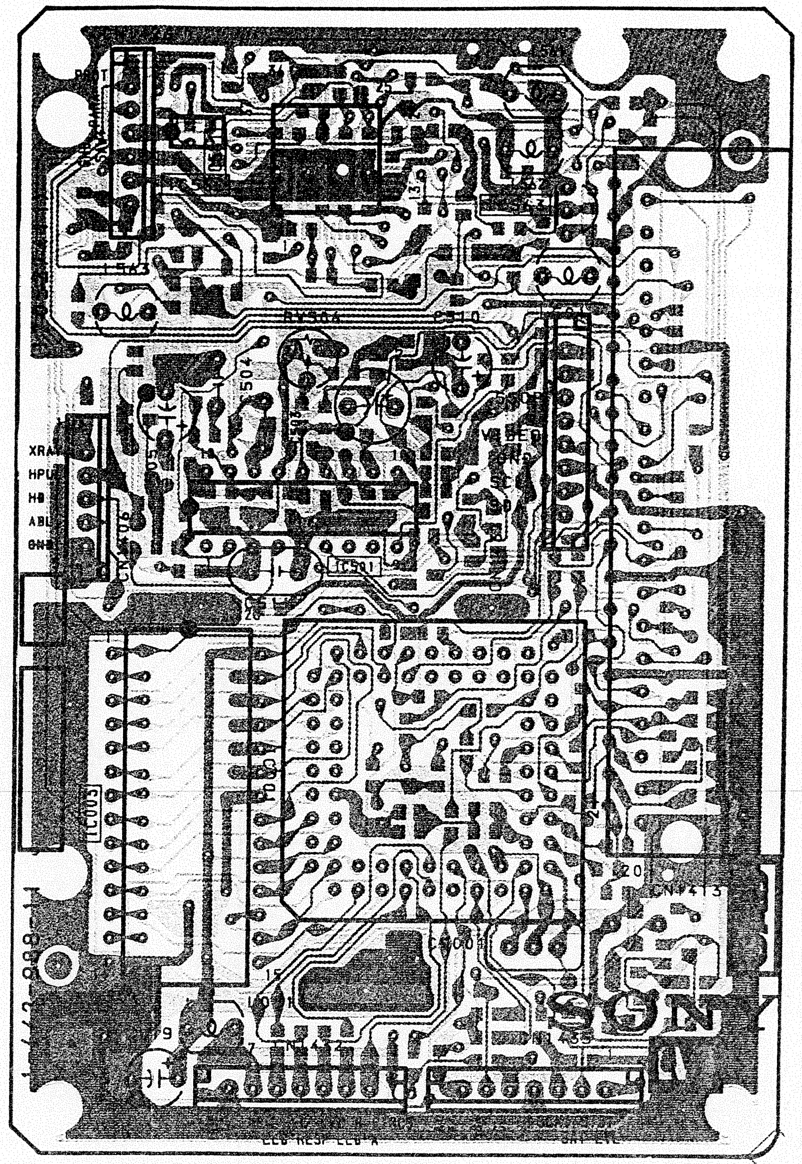


- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

– M Board (Conductor Side) –

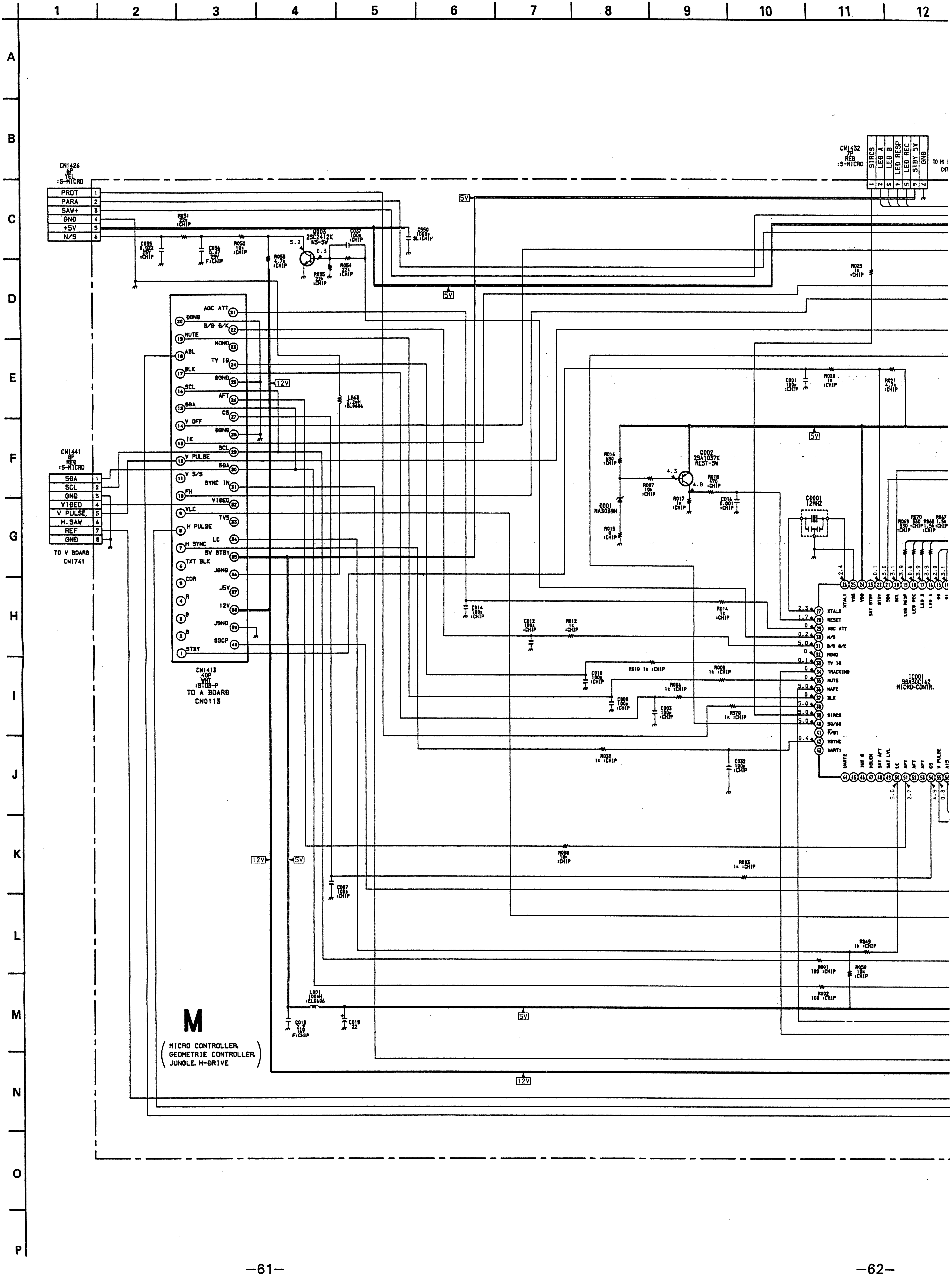

SONY
CAD
(1705274 11)
1-642-
CN1406

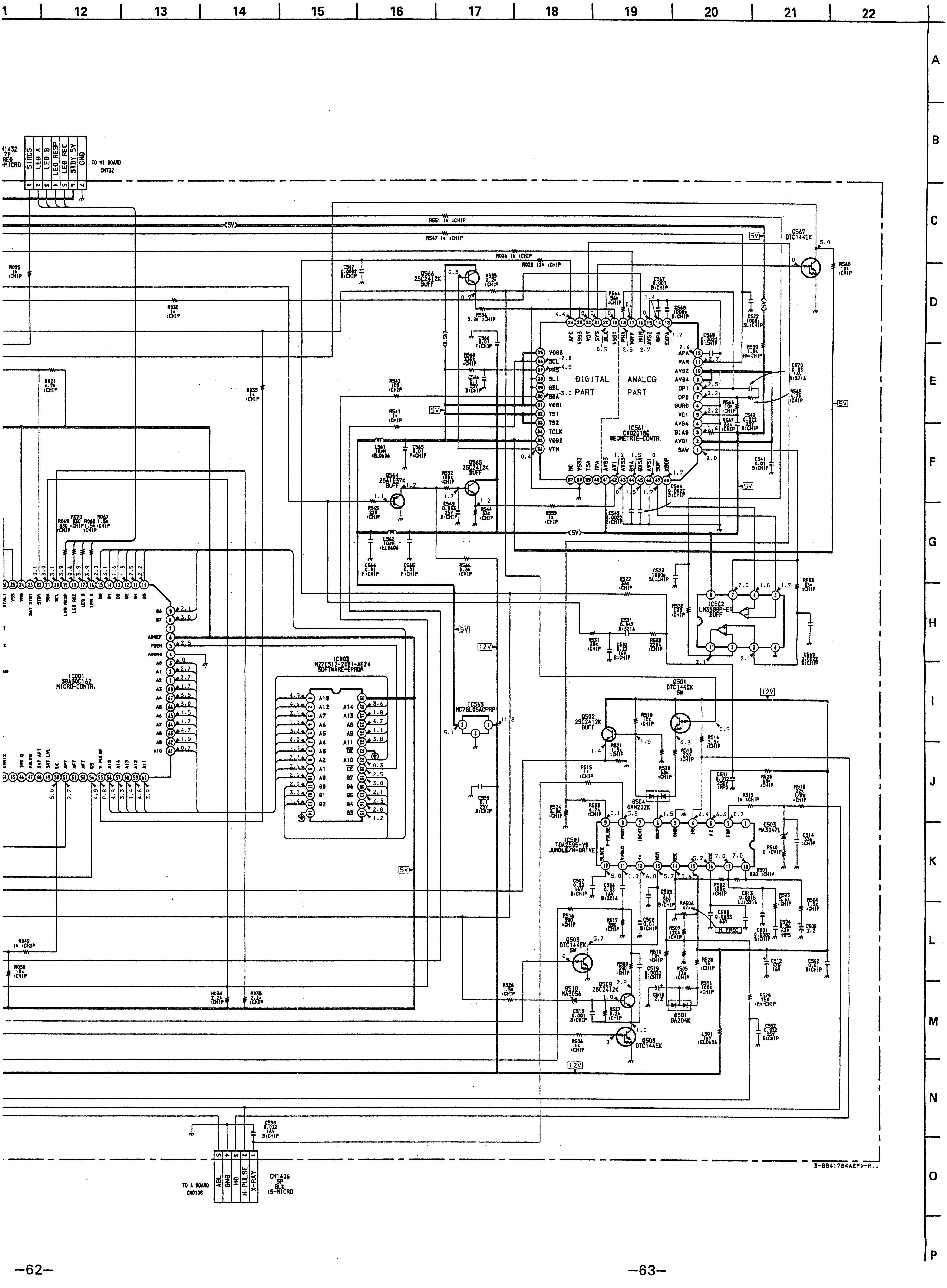
– M Board (Component Side) –


XRA
HPU
HB
ABL
SONY

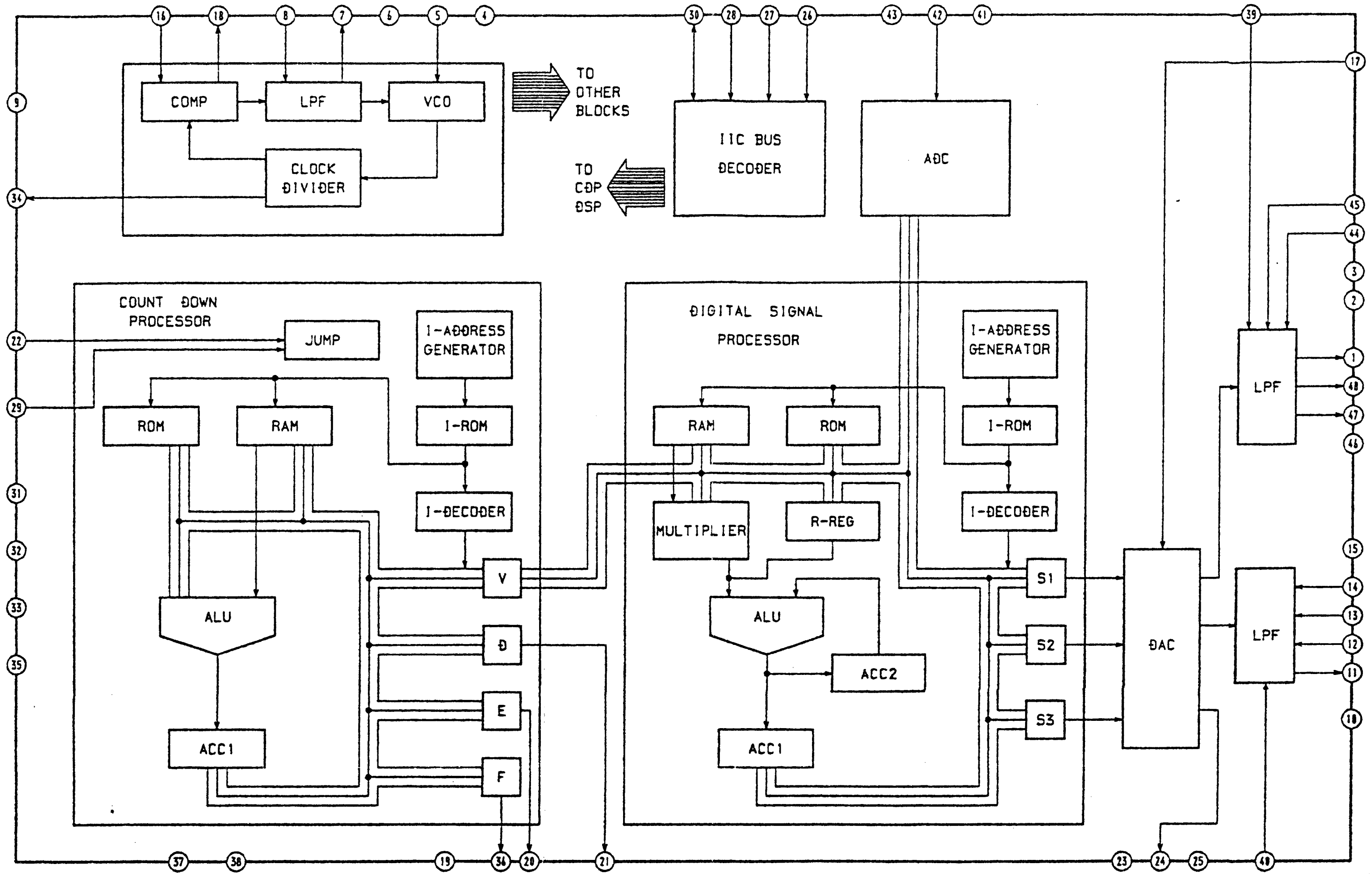
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

(3) Schematic Diagram of M Board

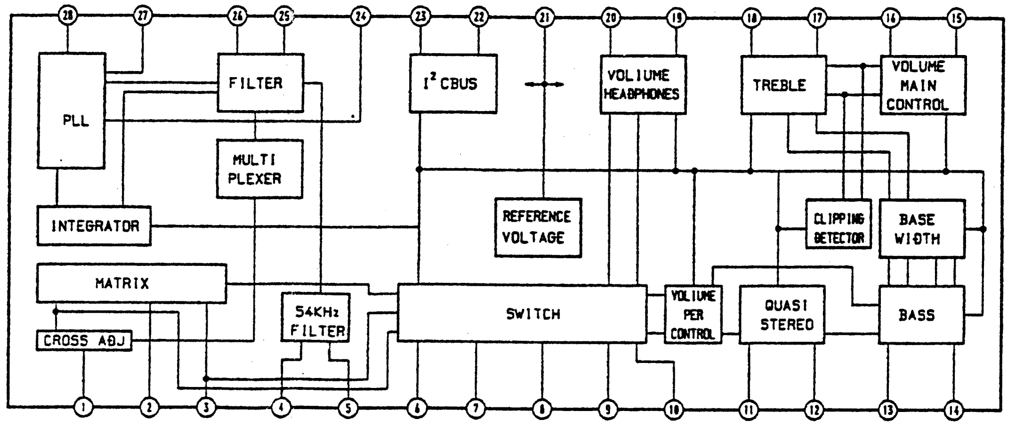

CN1426 6P YEL :S-MICRO
PROT
PARA
SAW+
GND
+5V
N/S
CN1432 7P RED :S-MICRO
SIRCS
LED A
LED B
LED RESP
LED REC
STBY 5V
GND
5V
12V
Q005 2SC2412K NS-SW
Q002 2SA1037K REST-SW
D001 MA3039H
CF001 12MHZ
CN1441 8P RED :S-MICRO
SDA
SCL
GND
VIDEO
V PULSE
H.SAW
REF
GND
TO V BOARD CN1741
CN1413 40P WHT :BTOB-P TO A BOARD CN0113
AGC ATT
B/G G/K
MONO
TV 18
AFT
CS
SYNC IN
VIDEO
TVS
LC
5V STBY
J5V
12V
SSCP
ABL
BLK
SCL
SDA
V OFF
IK
V PULSE
V S/S
FH
VLC
H PULSE
H SYNC
TXT BLK
COR
STBY
IC001 SDA30C162 MICRO-CONTR.
XTAL2
RESET
ABC ATT
N/S
B/G G/K
MONO
TV 18
TRACKING
MUTE
HAFC
BLK
SIRCS
50/60
HSYNC
UART1
UART2
L001 100uH
L543 2.2mH
M
(MICRO CONTROLLER, GEOMETRIE CONTROLLER, JUNGLE, H-DRIVE)


SIRCS
LED A
LED B
LED RESP
LED REC
STBY 5V
GND
TO M1 BOARD CN732
R551 1k :CHIP
R547 1k :CHIP
Q567 DTC144EK
Q566 2SC2412K BUFF
R026 1k :CHIP
R028 12k :CHIP
IC561 CXD2018Q GEOMETRIE-CONTR.
DIGITAL PART
ANALOG PART
AFC
VSS3
VST
SYS
BLK
VSS1
PHA
VOFF
HIN
AVS2
ØPA
EXPA
VDD3
SCL
PRS
SL1
ØBL
SDA
VDD1
TS1
TS2
TCLK
VDD2
VTM
APA
PAR
AVO2
AVD4
DP1
DPO
BURO
VC1
AVS4
BIAS
AVD1
SAW
NC
VSS2
TSA
TPA
AVB3
AV1
AVS3
ØSA
ØXSA
AVS1
SOP
XSOP
Q564 2SA1037K BUFF
Q565 2SC2412K BUFF
L561 10μH :EL0606
L562 10μH :EL0606
IC562 LM358DR-E1 BUFF
IC001 S0A30C162 MICRO-CONTR.
IC003 M27C512-2081-AE24 SOFTWARE-EPROM
IC563 MC78L05ACPRP
Q501 DTC144EK SW
Q502 2SC2412K BUFF
Q504 DAN202K
IC501 TDA2595-V9 JUNGLE/H-DRIVE
V-PULSE
PROT
IDENT
SSCP
GND
HR
FBP
SLICE
VIDEO
VCR
OSC
Q503 MA3047L
H. FREQ
Q503 DTC144EK SW
Q510 MA3056
Q509 2SC2412K
Q508 DTC144EK
Q501 BA204K
L501 1mH :EL0606
<5V>
5V
12V
(3.5V)
TO A BOARD CN0106
ABL
GND
HD
H-PULSE
X-RAY
CN1406 5P BLK :S-MICRO
B-SS4178<AEP>-M..

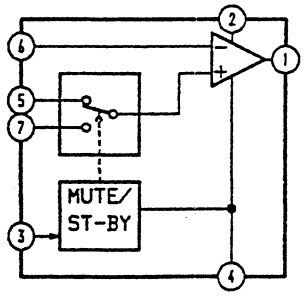
M Board IC561 CXD2018Q


COMP
LPF
VCO
CLOCK DIVIDER
TO OTHER BLOCKS
TO CDP DSP
IIC BUS DECODER
ADC
COUNT DOWN PROCESSOR
JUMP
I-ADDRESS GENERATOR
ROM
RAM
I-ROM
I-DECODER
ALU
ACC1
V
D
E
F
DIGITAL SIGNAL PROCESSOR
I-ADDRESS GENERATOR
RAM
ROM
I-ROM
MULTIPLIER
R-REG
I-DECODER
ALU
ACC2
ACC1
S1
S2
S3
DAC
LPF
LPF

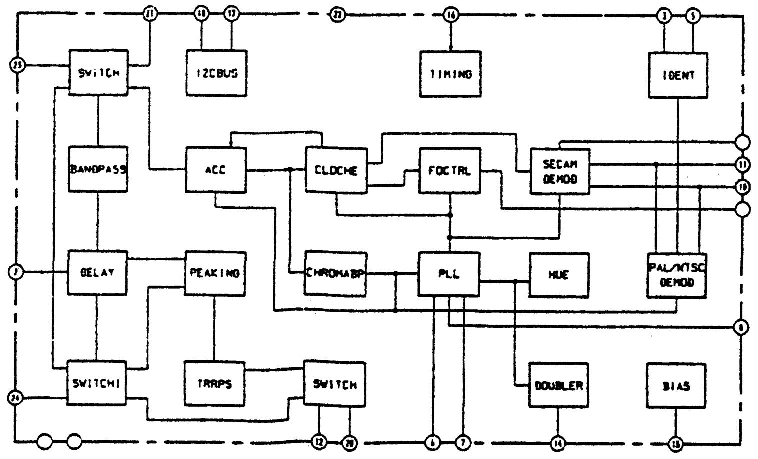
A Board IC201 TDA6612


PLL
FILTER
MULTI PLEXER
I^2 CBUS
VOLUME HEADPHONES
TREBLE
VOLUME MAIN CONTROL
INTEGRATOR
REFERENCE VOLTAGE
CLIPPING DETECTOR
BASE WIDTH
MATRIX
54KHz FILTER
SWITCH
VOLUME PER CONTROL
QUASI STEREO
BASS
CROSS ADJ

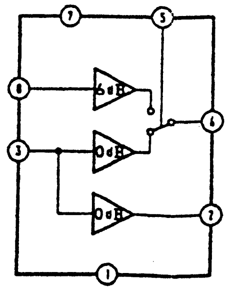
A Board IC251/261 TDA2052



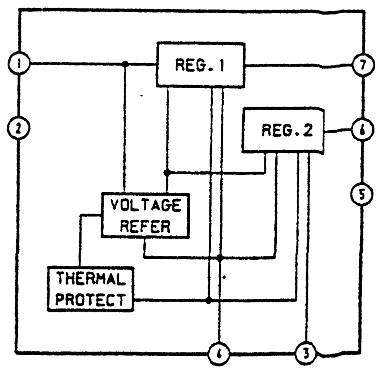
A Board IC301 TDA9145


SWITCH
I2CBUS
TIMING
IDENT
BANDPASS
ACC
CLOCHE
FOCTRL
SECAM DEMOD
DELAY
PEAKING
CHROMABP
PLL
HUE
PAL/NTSC DEMOD
SWITCHI
TRAPS
SWITCH
DOUBLER
BIAS

A Board IC402 TEA2114

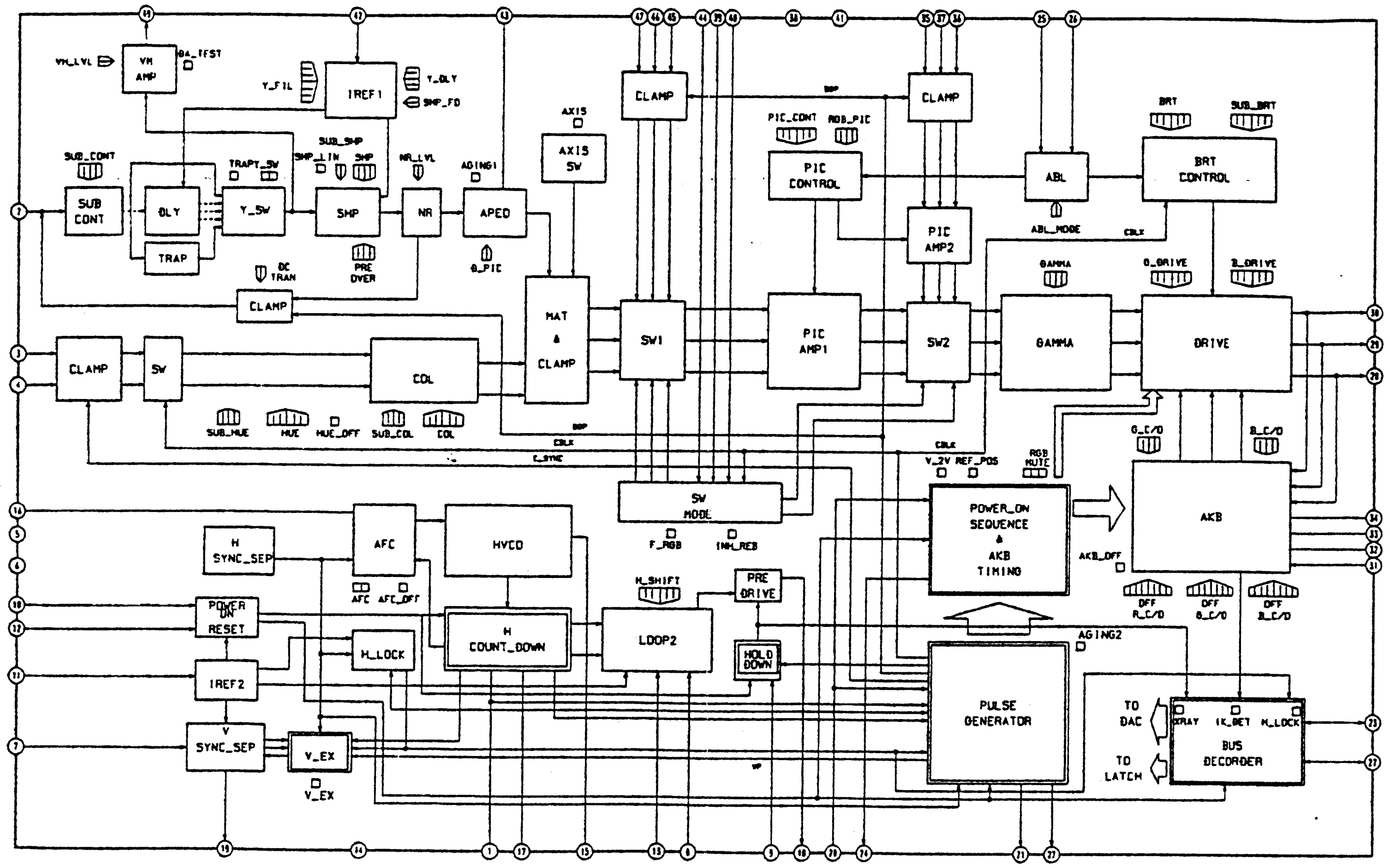


A Board IC681 TDA8138A

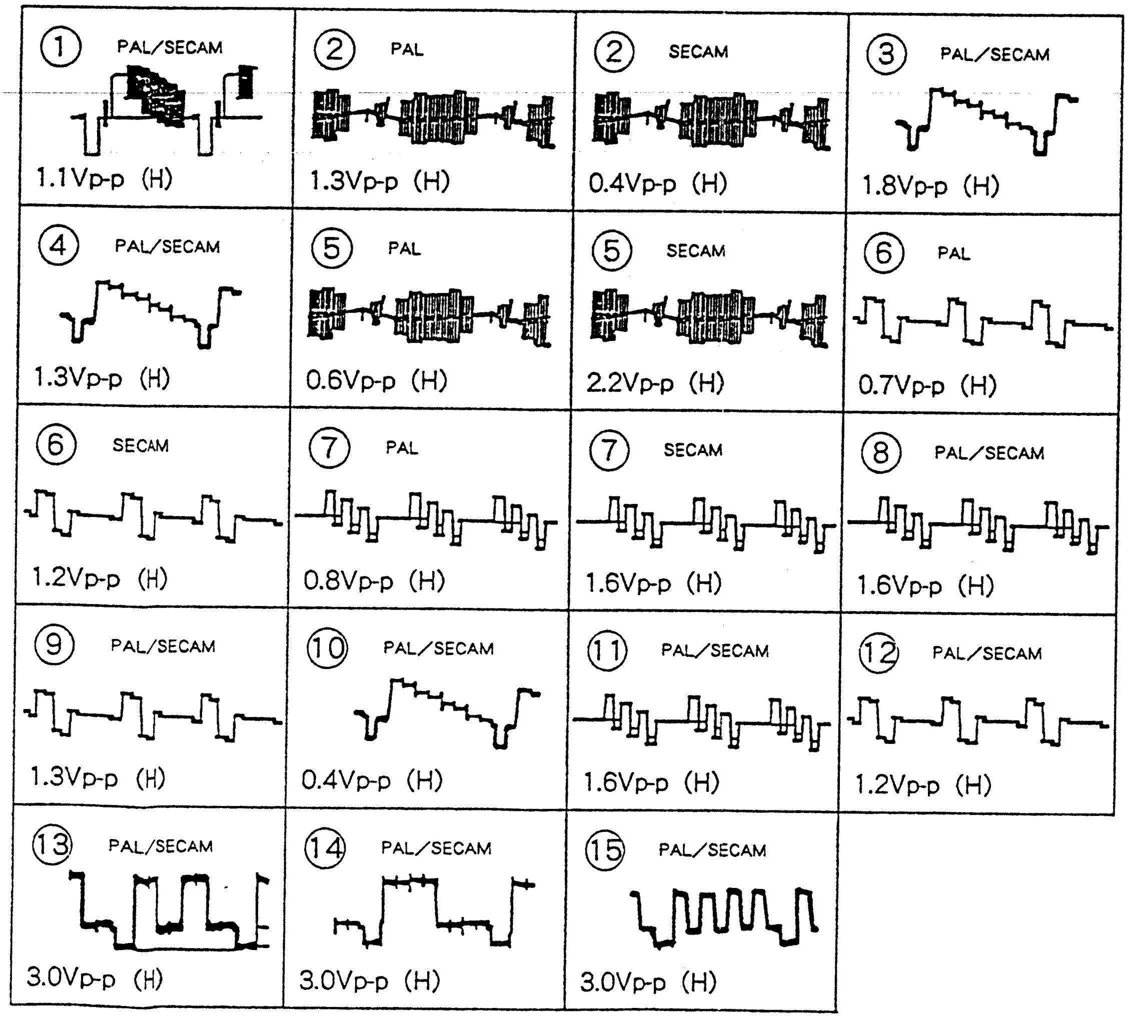

REG. 1
REG. 2
VOLTAGE REFER
THERMAL PROTECT

66A

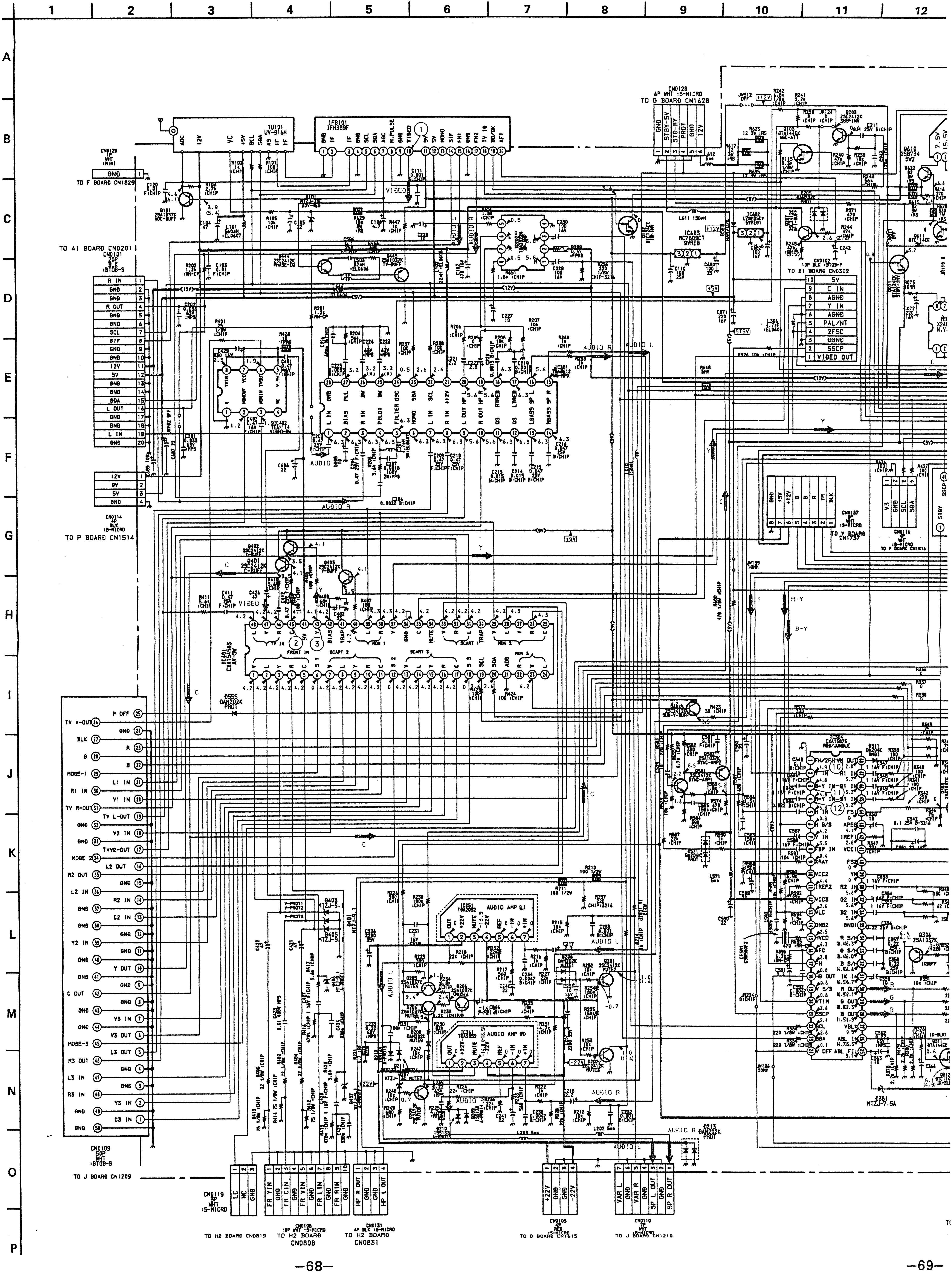
A Board IC304 CXA1587S


VM AMP
IREF1
Y_DLY
AXIS SW
CLAMP
PIC CONTROL
ABL
BRT CONTROL
SUB CONT
DLY
Y_SW
TRAP
SHP
NR
APED
CLAMP
MAT & CLAMP
SW1
PIC AMP1
PIC AMP2
SW2
GAMMA
DRIVE
CLAMP
SW
COL
SW MODE
POWER_ON SEQUENCE & AKB TIMING
AKB
H SYNC_SEP
AFC
HVCO
POWER ON RESET
H_LOCK
H COUNT_DOWN
LOOP2
PRE DRIVE
HOLD DOWN
IREF2
V SYNC_SEP
V_EX
PULSE GENERATOR
TO DAC
TO LATCH
BUS DECORDER

A BOARD WAVEFORMS



(4) Schematic Diagram of A Board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C
D
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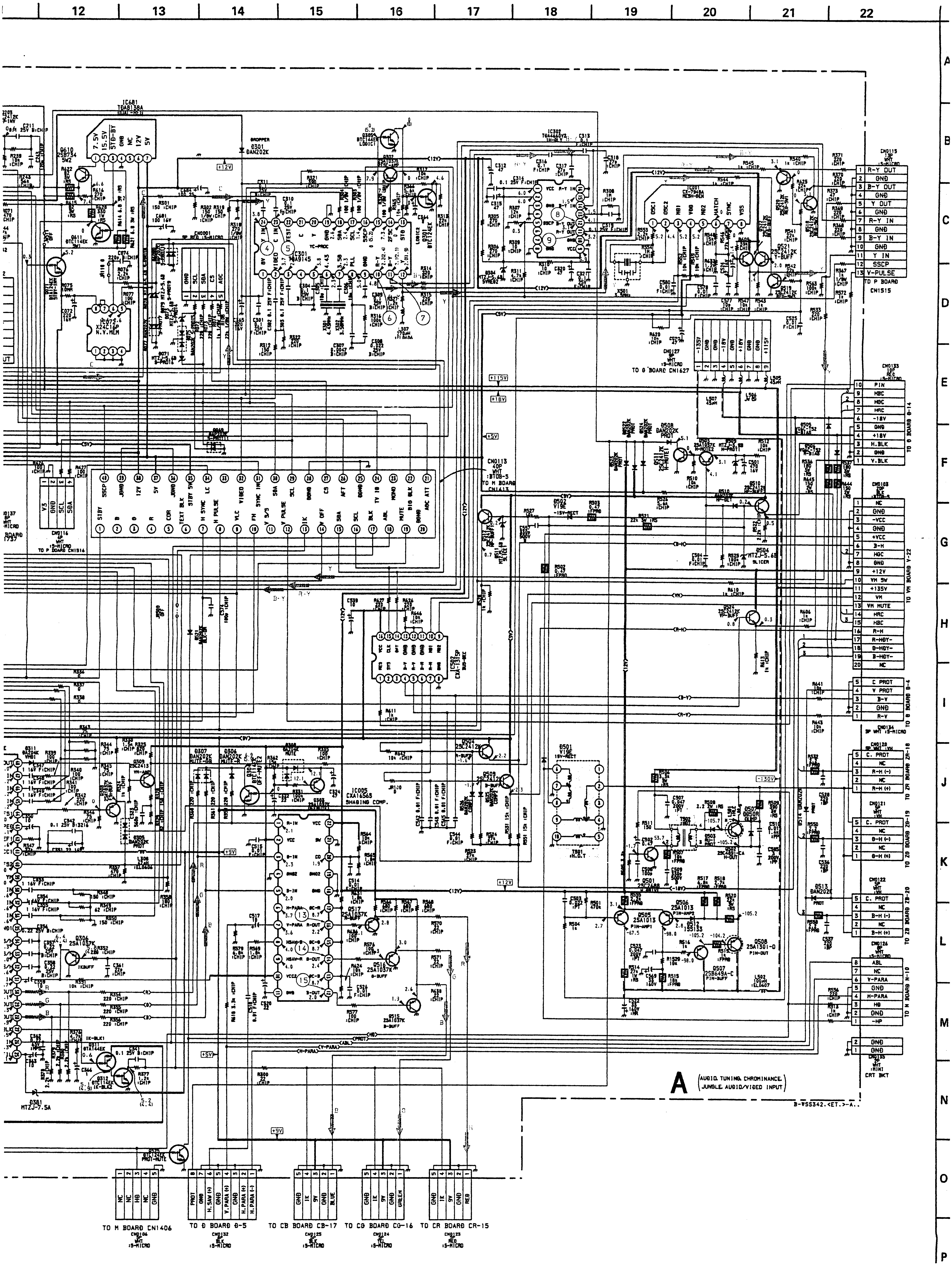
H
I
J
K
L
M
N
O
P
TU101
UV-916H
AGC
12V
VC
+5V
SCL
SDA
AS
IF
IFB101
IFH389F
VIDEO
AFT
CN0129
1P
WHT
:MINI
GND
TO F BOARD CN1829
Q101
2SA1037K
AGC-BUFF
TO A1 BOARD CN0201
CN0101
20P
BLK
:BTOB-S
R IN
GND
R OUT
SCL
SIF
12V
5V
SDA
L OUT
L IN
9V
CN0114
4P
BLK
:S-MICRO
TO P BOARD CN1514
CN0128
6P WHT :S-MICRO
TO G BOARD CN1628
STBY-5V
STD-BY
PROT
IC682
L78M05CV
5VREG
IC683
MC7809CT
9VREG
CN0102
10P BLK :BTOB-P
TO B1 BOARD CN0302
C IN
AGND
Y IN
PAL/NT
2FSC
DGND
SSCP
VIDEO OUT
IC201
AUDIO R
AUDIO L
L IN
BIAS
PLL
PILOT
FILTER OSC
MONO
L OUT
R OUT
LBASS
RBASS
IC402
Q401
2SC2412K
C-BUFF
Q402
2SC2412K
Q403
2SC2412K
Y-BUFF
IC401
CXA1545S
AV-SW
TV IN
FRONT IN
SCART 2
SCART 3
SCART 1
MON 1
MON 2
MON 3
D555
BAN202K
PROT
Q404
2SC2412K
SUB-V-BUFF
CN0137
8P
WHT
:S-MICRO
TO V BOARD CN1737
BLK
CN0116
TO P BOARD CN1516
STBY
V3
IC581
IC584
CXA1587S
RGB/JUNGLE
P OFF
TV V-OUT
BLK
MODE-1
R1 IN
V1 IN
TV R-OUT
TV L-OUT
V2 IN
TVV2-OUT
MODE 2
L2 OUT
R2 OUT
L2 IN
R2 IN
C2 IN
Y2 IN
Y OUT
C OUT
V3 IN
V3 OUT
MODE-3
L3 OUT
R3 OUT
L3 IN
R3 IN
Y3 IN
C3 IN
CN0109
50P
WHT
:BTOB-S
TO J BOARD CN1209
IC251
TDA2052
AUDIO AMP (L)
IC261
TDA2052
AUDIO AMP (R)
MUTE
REF
Q201
2SC2412K
MUTE2
Q202
2SC2412K
MUTE3
Q204
2SA1037K
MUTE4
Q205
2SA1037K
MUTE4
Q206
2SA1037K
D213
BAN202K
PROT
D381
MTZJ-7.5A
D403
MTZJ-9.1
D401
MTZJ-9.1
D405
MTZJ-9.1
V-PROT1
V-PROT2
V-PROT3
CN0119
3P
WHT
:S-MICRO
LC
NC
GND
FR YIN
FR CIN
FR VIN
FR LIN
FR RIN
HP R OUT
HP L OUT
CN0108
10P WHT :S-MICRO
CN0131
4P BLK :S-MICRO
TO H2 BOARD CN0819
TO H2 BOARD
CN0808
TO H2 BOARD
CN0831
+22V
-22V
CN0105
4P
RED
:S-MICRO
TO G BOARD CN1615
VAR L
VAR R
SP L OUT
SP R OUT
CN0110
7P
WHT
:S-MICRO
TO J BOARD CN1210
Q610
2SB734
SW2
Q611
DTC114EK
Q311
DTA144EK
Q306
2SA1037K
Q203
2SC2412K
Q103
DTA144EK
AGC-ATT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A
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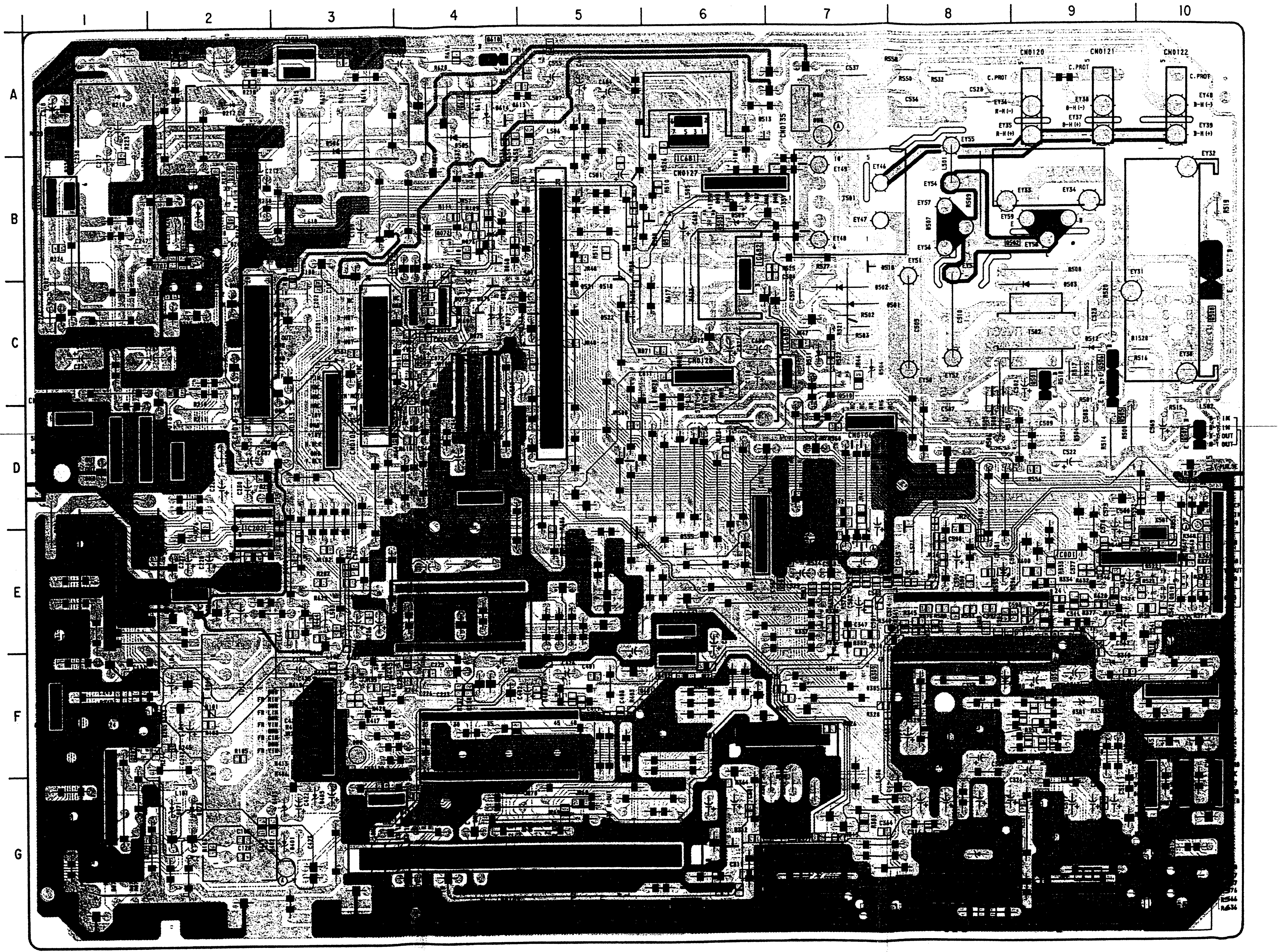
L
M
N
O
P
IC681 TDA8138A DUAL-REG
IC301 TDA9145 YC-PROC
IC302 TDA4660V2 1H-DLY
IC001 CX-7948A HESH-GEN
IC502 CXA-1315P BUS-DEC
IC005 CXA1656S SHADING COMP.
IC072 X24C16P N.V.MEM
CN0113 40P WHT :BTOB-S TO M BOARD CN1413
CN0115 13P WHT :S-MICRO
R-Y OUT
GND
B-Y OUT
GND
Y OUT
GND
R-Y IN
GND
B-Y IN
GND
Y IN
SSCP
V-PULSE
TO P BOARD CN1515
TO G BOARD CN1627
TO G BOARD G-14
TO VM BOARD V-22
TO B BOARD B-4
TO ZR BOARD ZR-18
TO ZG BOARD ZG-19
TO ZB BOARD ZB-20
TO N BOARD N-10
CRT BKT
TO M BOARD CN1406
TO D BOARD D-5
TO CB BOARD CB-17
TO CG BOARD CG-16
TO CR BOARD CR-15
TO P BOARD CN1516
A (AUDIO, TUNING, CHROMINANCE, JUNGLE, AUDIO/VIDEO INPUT)
B-Y55342.<ET.>-A..

A [AUDIO, TUNING, CHROMINANCE, JUNGLE, AUDIO/VIDEO INPUT]

A Board

IC	
IC001	E – 10
IC005	G – 9
IC072	C – 4
IC201	E – 4
IC202	E – 2
IC251	A – 3
IC261	B – 1
IC301	G – 7
IC302	G – 8
IC304	E – 8
IC401	F – 4
IC402	E – 6
IC502	D – 4
IC681	A – 6
IC682	B – 6
IC683	C – 7
TRANSISTOR	
Q071	B – 5
Q101	G – 1
Q102	G – 1
Q103	G – 1
Q201	C – 2
Q202	C – 2
Q203	F – 1
Q204	B – 2
Q205	B – 2
Q206	B – 2
Q207	F – 1
Q209	B – 2
Q301	G – 8
Q302	G – 7
Q303	G – 9
Q304	G – 9
Q305	G – 7
Q306	F – 9
Q308	F – 8
Q309	F – 7
Q311	E – 9
Q312	E – 9
Q401	F – 6
Q402	F – 6
Q403	F – 6
Q404	G – 4
Q444	E – 3
Q445	F – 3
Q501	C – 9
Q502	B – 9
Q503	B – 6
Q504	D – 4
Q505	C – 9
Q506	C – 9
Q507	D – 10
Q508	C – 10
Q509	C – 4
Q510	C – 7
Q511	B – 6
Q512	C – 7
Q515	G – 10
Q516	G – 10
Q517	G – 10
Q518	F – 10
Q519	E – 10
Q520	F – 10
Q521	E – 10
Q522	E – 10
Q524	E – 5
Q525	E – 9
Q581	E – 7
Q582	D – 7
Q610	A – 4
Q611	A – 5
DIODE	
D068	B – 4
D069	F – 2
D071	G – 2
D073	G – 2
D075	G – 2
D077	C – 4
D078	C – 4
D079	C – 4
D101	E – 2
D205	F – 2
D206	B – 2
D207	B – 2
D208	B – 2
D209	A – 1
D210	A – 1
D211	A – 2
D212	A – 2
D213	C – 1
D301	G – 6
D304	G – 8
D305	F – 7
D306	G – 9
D307	G – 9
D308	G – 9
D311	E – 7
D381	F – 9
D401	G – 3
D403	G – 3
D405	G – 3
D406	F – 3
D407	F – 3
D501	C – 7
D502	C – 7
D503	C – 9
D504	C – 7
D505	A – 4
D506	A – 3
D507	B – 8
D508	B – 6
D509	B – 6
D510	B – 7
D511	C – 7
D512	C – 9
D513	A – 7
D514	E – 5
D518	C – 5
D521	B – 5
D522	C – 5
D523	C – 6
D524	B – 5
D525	C – 4
D526	D – 4
D555	E – 6
D571	E – 8

– A Board –



- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

D Board

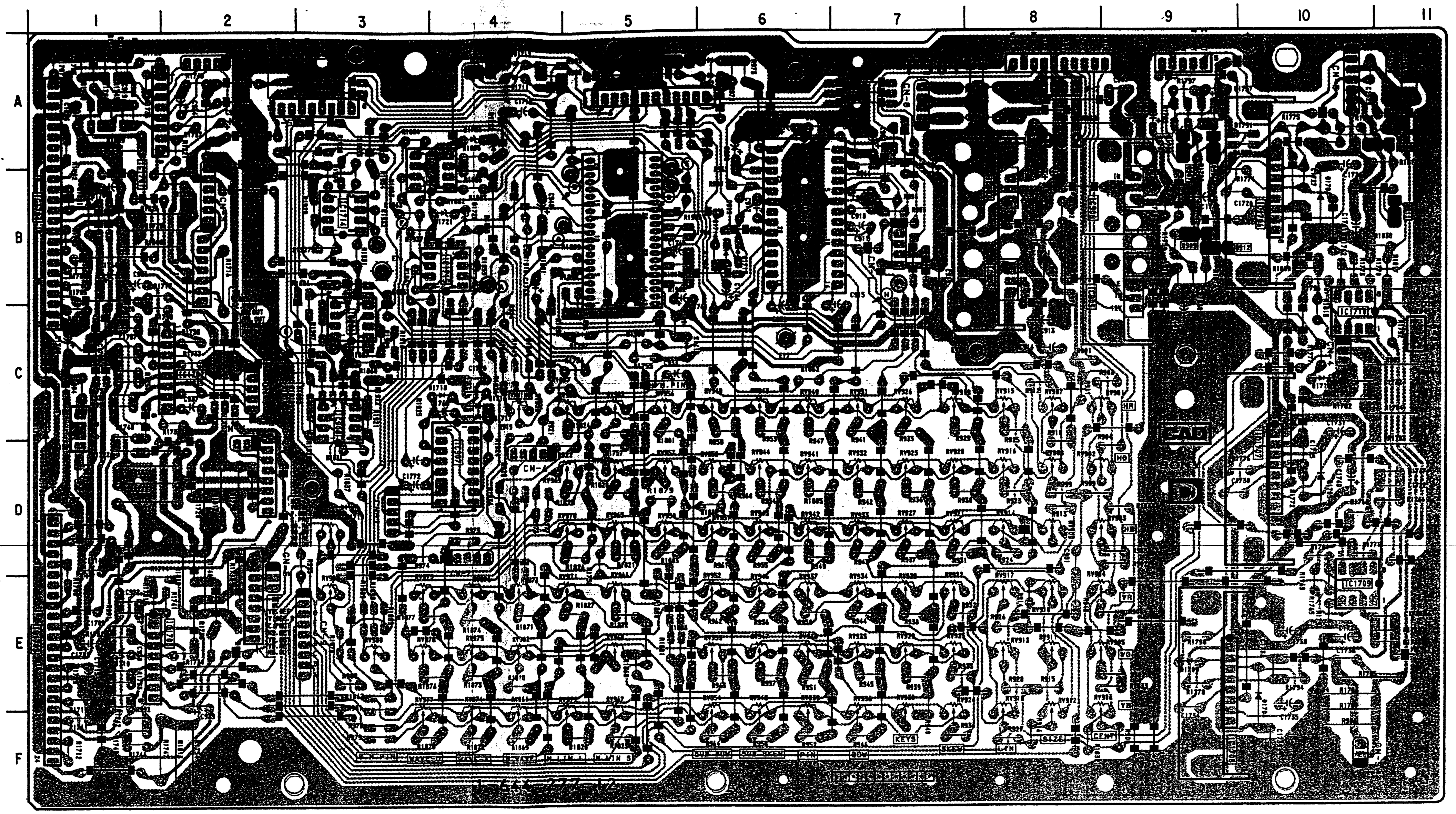
IC	
IC901	C – 3
IC902	B – 6
IC903	B – 8
IC904	B – 8
IC905	B – 9
IC906	B – 9
IC907	D – 4
IC908	C – 3
IC910	B – 5
IC1701	A – 1
IC1702	C – 2
IC1703	E – 1
IC1704	B – 1
IC1705	E – 1
IC1706	B – 10
IC1707	D – 10
IC1708	E – 9
IC1709	E – 10
IC1710	C – 10
IC1714	B – 3
IC1715	B – 4
IC1718	A – 4

DIODE	
D901	A – 6
D902	A – 6
D1701	B – 1
D1702	C – 5
D1703	C – 1
D1704	B – 10
D1705	D – 10
D1706	E – 10
D1707	A – 9
D1708	A – 9
D1709	E – 9
D1710	C – 10
D1711	A – 4
D1712	A – 4
D1713	C – 5
D1714	B – 6
D1715	B – 6
D1716	C – 4
D1717	C – 4
D1718	C – 4
D1720	B – 4
D1721	B – 4
D1722	A – 4
D1723	A – 4

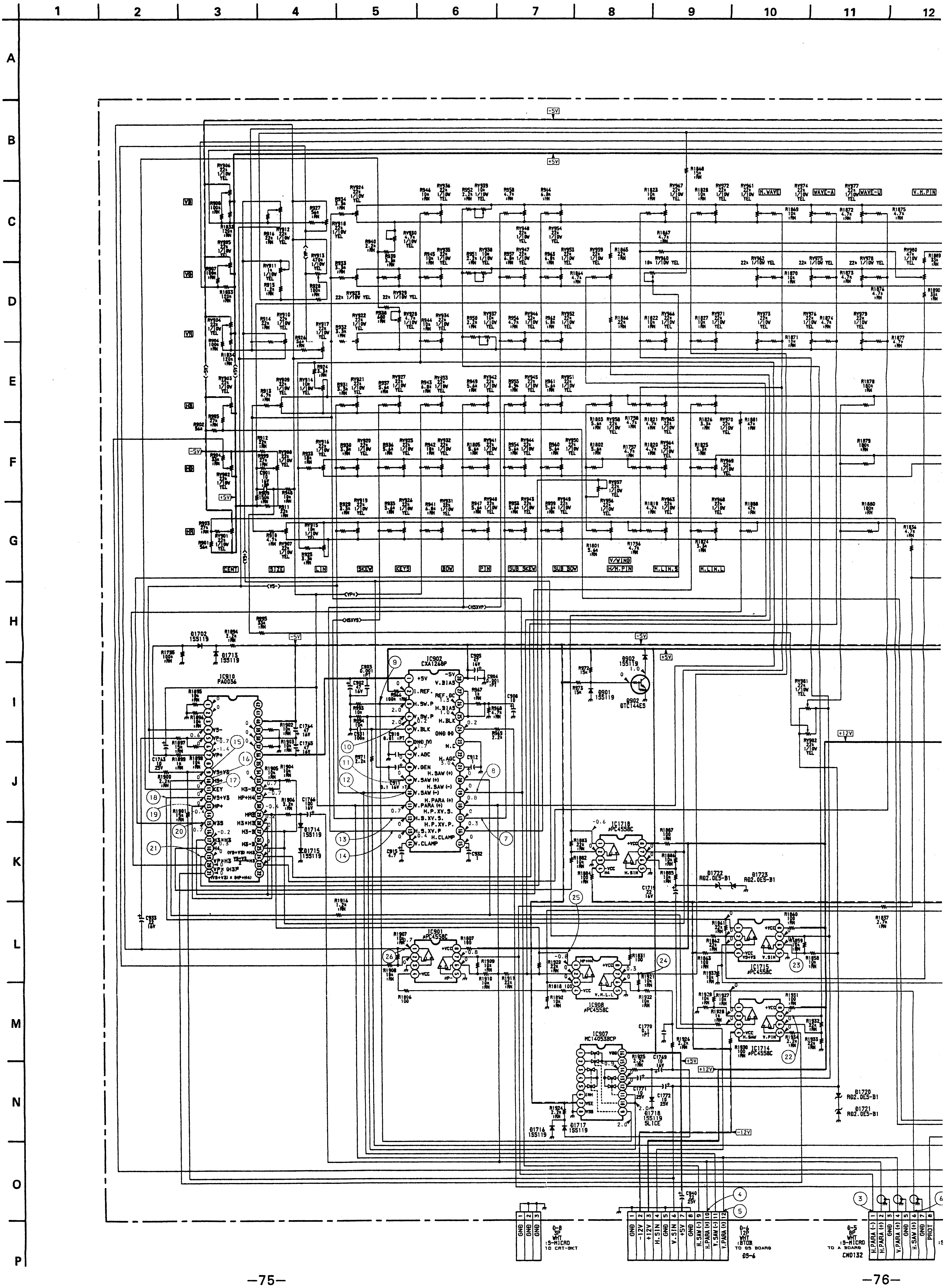
TRANSISTOR	
Q902	A – 5
Q906	A – 9
Q907	A – 9
Q908	A – 4
Q909	B – 9
Q910	A – 11
Q911	B – 11
Q912	B – 9

VARIABLE RESISTOR	
RV901	C – 9
RV902	D – 9
RV903	D – 9
RV904	E – 9
RV905	E – 9
RV906	F – 9
RV907	C – 8
RV908	D – 8
RV909	D – 8
RV910	E – 8
RV911	E – 8
RV912	F – 8
RV913	E – 8
RV914	D – 8
RV915	C – 8
RV916	D – 8
RV917	E – 8
RV918	F – 8
RV919	C – 7
RV920	D – 7
RV921	D – 7
RV922	F – 7
RV923	F – 7
RV924	F – 7
RV925	D – 7
RV926	C – 7
RV927	D – 7
RV928	E – 7
RV929	E – 7
RV930	F – 7
RV931	C – 7
RV932	D – 7
RV933	D – 7
RV934	E – 7
RV935	E – 7
RV936	F – 7
RV937	E – 6
RV938	E – 6
RV939	F – 6
RV940	C – 6
RV941	D – 6
RV942	D – 6
RV943	C – 6
RV944	D – 6
RV945	D – 6
RV946	E – 6
RV947	E – 6
RV948	F – 6
RV949	C – 6
RV950	D – 6
RV951	D – 6
RV952	E – 6
RV953	E – 6
RV954	F – 6
RV956	C – 5
RV957	D – 5
RV958	D – 5
RV959	C – 4
RV960	E – 5
RV961	F – 4
RV962	E – 4
RV963	C – 5
RV964	D – 5
RV965	D – 5
RV966	E – 5
RV967	F – 5
RV968	C – 5
RV969	D – 5
RV970	D – 5
RV971	E – 5
RV972	F – 5
RV973	E – 4
RV974	F – 4
RV975	E – 4
RV976	E – 4
RV977	F – 3
RV978	E – 3
RV979	E – 3
RV980	E – 3
RV981	E – 3
RV982	D – 3

– D Board –



(5) Schematic Diagram of D Board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M
N
O
P
-5V
+5V
VB
VB
VR
HB
HR
-5V
+5V
CENT
SIZE
LIN
SKEW
KEYS
BOW
PIN
SUB SKEW
SUB BOW
V/WING
H/H.PIN
H.LIN.S
H.LIN.L
H.WAVE
WAVE-A
WAVE-U
V.H.PIN
IC910
PA0036
IC902
CXA1268P
+5V
REF.
SW.P
V.BLK
GND (V)
V.AGC
V.GEN
V.SAW (+)
V.SAW (-)
H.PARA (+)
H.XV.S.
H.S.XV.P
V.CLAMP
-5V
V.BIAS
REF.DC
H.BIAS
H.BLK
GND (H)
N.C
H.AGC
H.SAW (+)
H.SAW (-)
H.P.XV.S.
H.P.XV.P.
H.CLAMP
D1702
1SS119
D1713
1SS119
D1714
1SS119
D1715
1SS119
Q902
1SS119
Q901
1SS119
Q902
DTC144ES
IC1718
μPC4558C
IC901
μPC4558C
IC908
μPC4558C
IC1715
μPC4558C
IC1714
μPC4558C
IC907
MC14053BCP
D1722
RD2.0ES-B1
D1723
RD2.0ES-B1
D1720
RD2.0ES-B1
D1721
RD2.0ES-B1
D1716
1SS119
D1717
1SS119
D1718
1SS119
SLICE
+12V
-12V
+5V
GND
GND
GND
D-8
3P
WHT
:S-MICRO
TO CRT-BKT
GND
-12V
+12V
H.SIN
GND
V.SIN
GND
+5V
H.SAW (-)
H.PARA (+)
V.SAW (-)
V.PARA (+)
D-6
12P
WHT
:BTOB
TO BS BOARD
BS-6
D-5
8P
WHT
:S-MICRO
TO A BOARD
CN0132
H.PARA (-)
H.PARA (+)
GND
V.PARA (+)
GND
H.SAW (+)
GND
PROT
C940
22
25V
①
②
③
④
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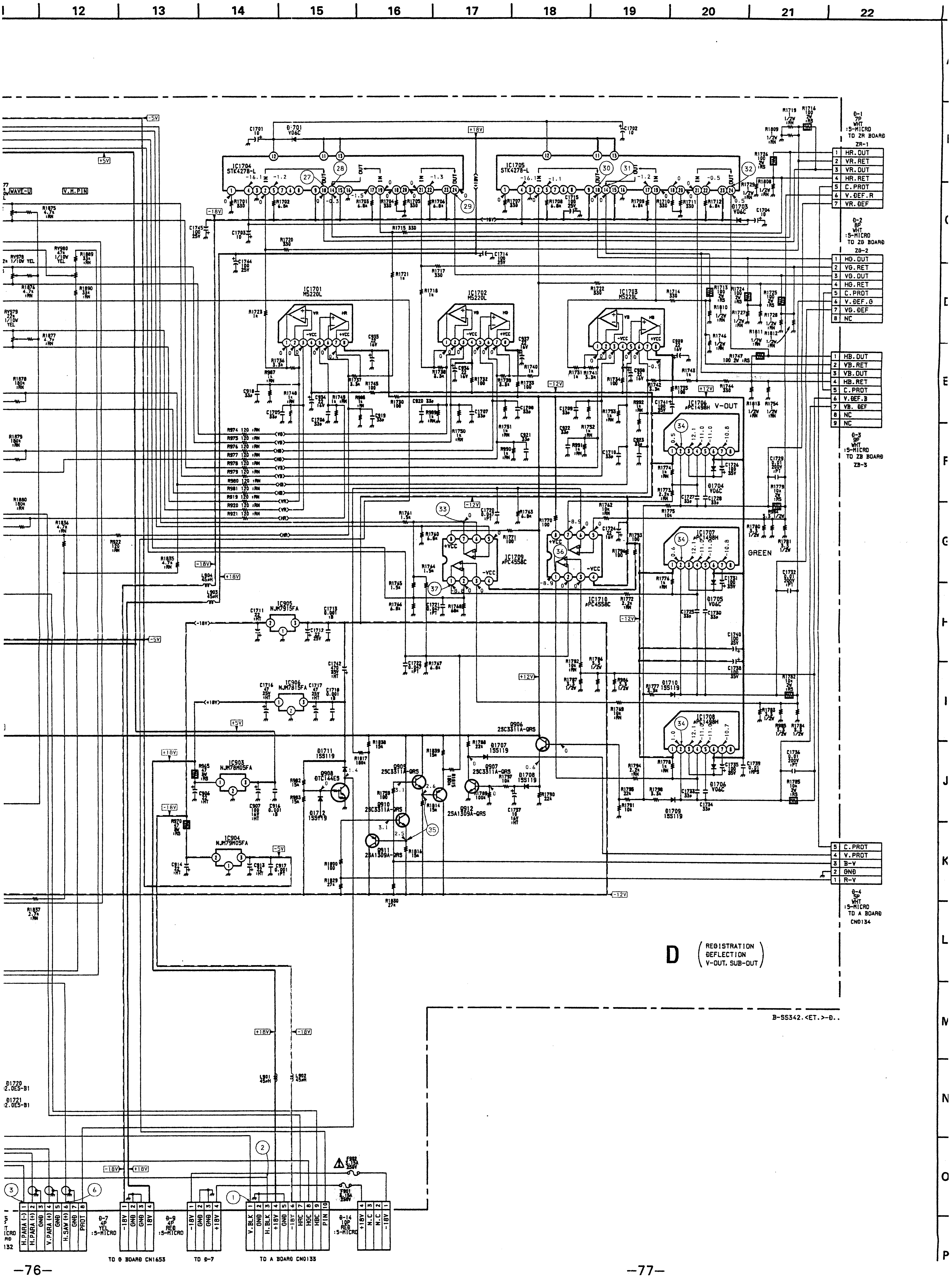
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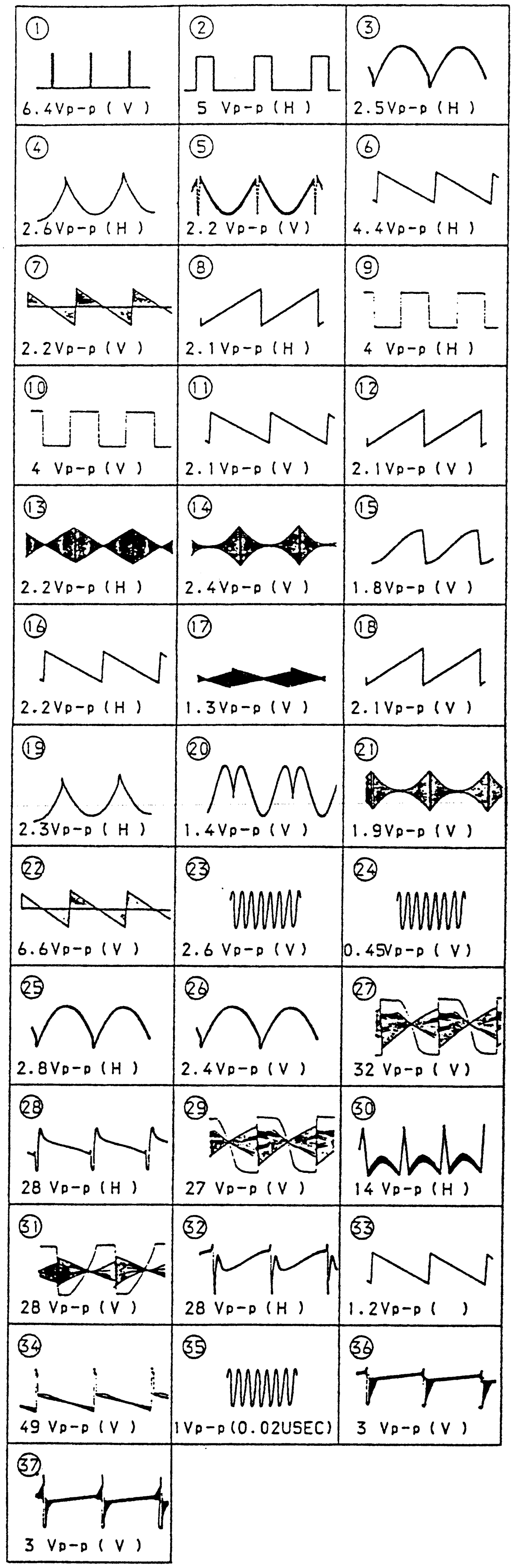
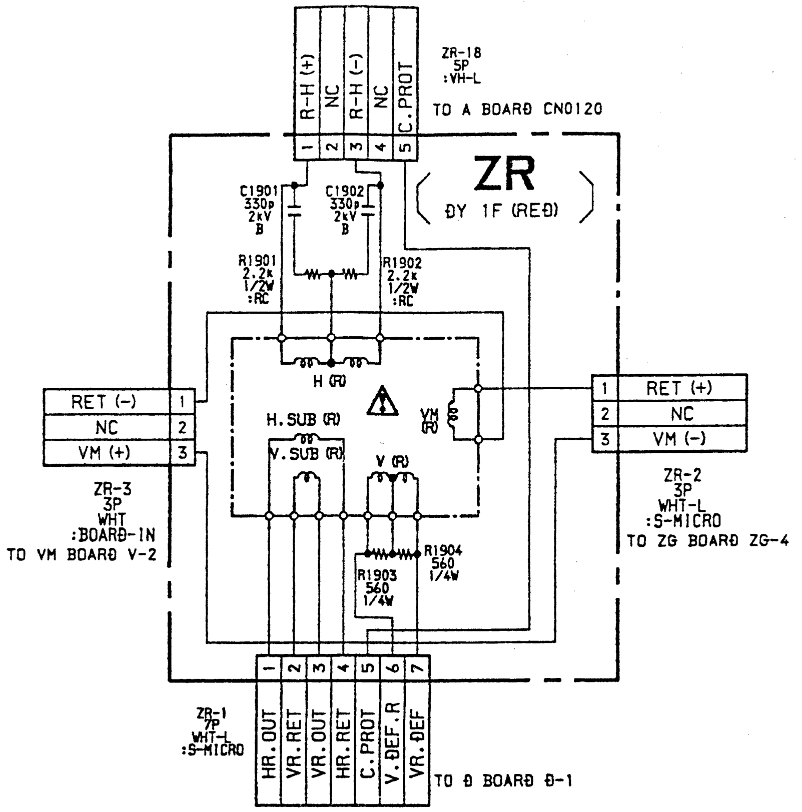
IC1704 STK4278-L
IC1705 STK4278-L
IC1701 M5220L
IC1702 M5220L
IC1703 M5220L
IC1706 μPC1498H V-OUT
IC1707 μPC1498H
GREEN
IC1708 μPC1498H
IC1709 μPC4558C
IC1710 μPC4558C
IC905 NJM7915FA
IC906 NJM7815FA
IC903 NJM78M05FA
IC904 NJM79M05FA
Q906 2SC3311A-QRS
Q907 2SC3311A-QRS
Q908 DTC144ES
Q909 2SC3311A-QRS
Q910 2SC3311A-QRS
Q911 2SA1309A-QRS
Q912 2SA1309A-QRS
D-1 7P WHT :S-MICRO TO ZR BOARD ZR-1
1 HR.OUT
2 VR.RET
3 VR.OUT
4 HR.RET
5 C.PROT
6 V.DEF.R
7 VR.DEF
D-2 8P WHT :S-MICRO TO ZG BOARD ZG-2
1 HG.OUT
2 VG.RET
3 VG.OUT
4 HG.RET
5 C.PROT
6 V.DEF.G
7 VG.DEF
8 NC
1 HB.OUT
2 VB.RET
3 VB.OUT
4 HB.RET
5 C.PROT
6 V.DEF.B
7 VB.DEF
8 NC
9 NC
D-3 9P WHT :S-MICRO TO ZB BOARD ZB-3
5 C.PROT
4 V.PROT
3 B-V
2 GND
1 R-V
D-4 5P WHT :S-MICRO TO A BOARD CN0134
D
REGISTRATION
DEFLECTION
V-OUT, SUB-OUT
B-SS342.<ET.>-D..
1 H.PARA(-)
2 H.PARA(+)
3 GND
4 V.PARA(+)
5 GND
6 H.SAW(+)
7 GND
8 PROT
-18V
GND
GND
18V
D-7 4P YEL :S-MICRO
TO G BOARD CN1653
-18V
GND
GND
+18V
D-9 4P RED :S-MICRO
TO D-7
1 V.BLK
2 GND
3 H.BLK
4 +18V
5 GND
6 -18V
7 HRC
8 HBC
9 PIN
10
TO A BOARD CN0133
+18V
N.C
N.C
-18V
D-14 10P RED :S-MICRO
F902 0.15A 250V
F901 0.15A 250V
L901 45μH
L902 45μH
L903 45μH
L904 45μH
D1720 2.0ES-B1
D1721 2.0ES-B1
WAVE-U
V.M.PIN
+18V
-18V
+12V
-12V
+5V
-5V

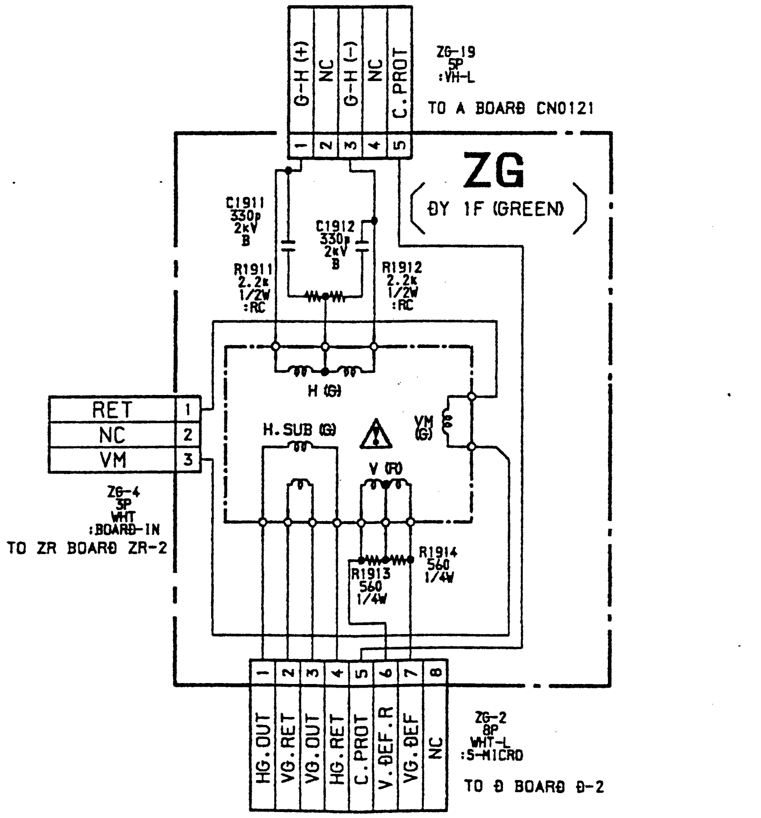
D BOARD WAVEFORMS



(6) Schematic Diagrams of ZR, ZG and ZB Boards


R-H (+)
NC
R-H (-)
NC
C.PROT
ZR-18
5P
:VH-L
TO A BOARD CN0120
ZR
DY 1F (RED)
C1901
330p
2kV
B
C1902
330p
2kV
B
R1901
2.2k
1/2W
:RC
R1902
2.2k
1/2W
:RC
H (R)
H.SUB (R)
V.SUB (R)
V (R)
VM (R)
RET (-)
NC
VM (+)
ZR-3
3P
WHT
:BOARD-IN
TO VM BOARD V-2
RET (+)
NC
VM (-)
ZR-2
3P
WHT-L
:S-MICRO
TO ZG BOARD ZG-4
R1903
560
1/4W
R1904
560
1/4W
ZR-1
7P
WHT-L
:S-MICRO
HR.OUT
VR.RET
VR.OUT
HR.RET
C.PROT
V.DEF.R
VR.DEF
TO D BOARD D-1

B-SS342.<ET.>-ZR.


G-H (+)
NC
G-H (-)
NC
C.PROT
ZG-19
5P
:VH-L
TO A BOARD CN0121
ZG
DY 1F (GREEN)
C1911
330p
2kV
B
C1912
330p
2kV
B
R1911
2.2k
1/2W
:RC
R1912
2.2k
1/2W
:RC
H (G)
H.SUB (G)
V (G)
VM (G)
RET
NC
VM
ZG-4
3P
WHT
:BOARD-IN
TO ZR BOARD ZR-2
R1913
560
1/4W
R1914
560
1/4W
HG.OUT
VG.RET
VG.OUT
HG.RET
C.PROT
V.DEF.R
VG.DEF
NC
ZG-2
8P
WHT-L
:S-MICRO
TO D BOARD D-2

B-SS342.<ET.>-ZG.

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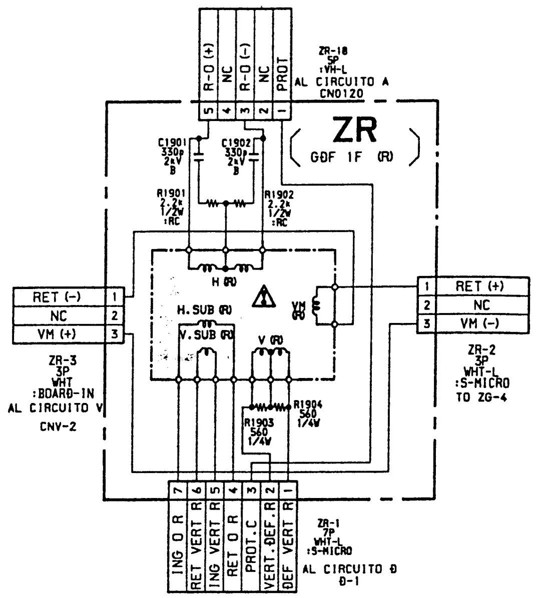
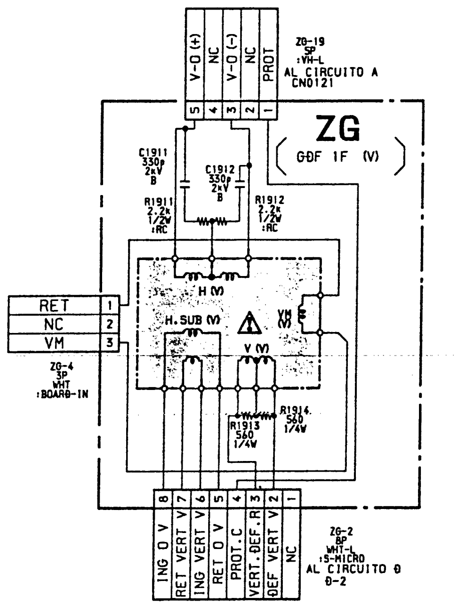
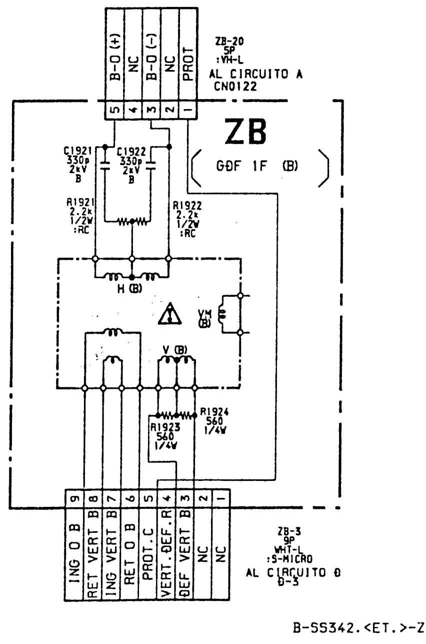
(6) Schema Elettrico Del Circuito ZR, ZG, ZB


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
R-O (+)
NC
R-O (-)
NC
PROT
5
4
3
2
1
ZR-18
5P
:VH-L
AL CIRCUITO A
CN0120
ZR
GDF 1F (R)
C1901
330p
2kV
B
C1902
330p
2kV
B
R1901
2.2k
1/2W
:RC
R1902
2.2k
1/2W
:RC
H (R)
H.SUB (R)
V.SUB (R)
V (R)
VM (R)
RET (-)
NC
VM (+)
ZR-3
3P
WHT
:BOARD-IN
AL CIRCUITO V
CNV-2
RET (+)
NC
VM (-)
ZR-2
3P
WHT-L
:S-MICRO
TO ZG-4
R1904
560
1/4W
R1903
560
1/4W
7
6
5
4
3
2
1
ING O R
RET VERT R
ING VERT R
RET O R
PROT.C
VERT.DEF.R
DEF VERT R
ZR-1
7P
WHT-L
:S-MICRO
AL CIRCUITO D
D-1

B-SS342.<ET.>-ZR.

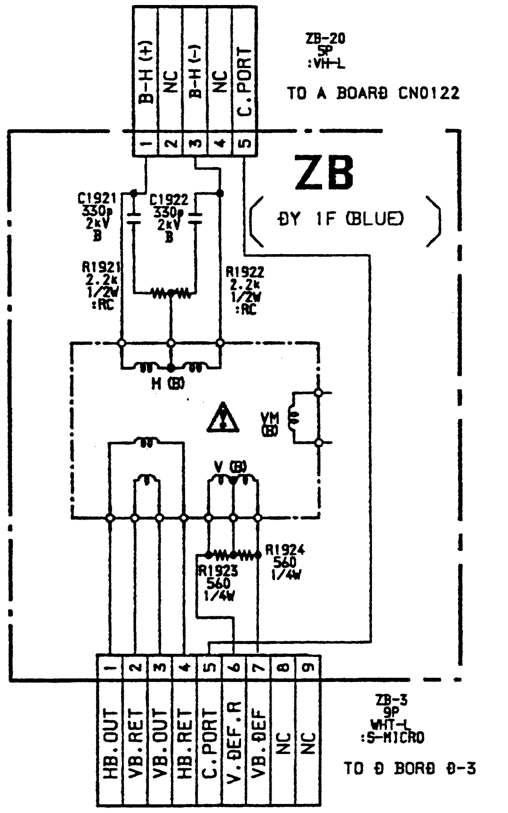

V-O (+)
NC
V-O (-)
NC
PROT
5
4
3
2
1
ZG-19
5P
:VH-L
AL CIRCUITO A
CN0121
ZG
GDF 1F (V)
C1911
330p
2kV
B
C1912
330p
2kV
B
R1911
2.2k
1/2W
:RC
R1912
2.2k
1/2W
:RC
H (V)
H.SUB (V)
V (V)
VM (V)
RET
NC
VM
ZG-4
3P
WHT
:BOARD-IN
R1914
560
1/4W
R1913
560
1/4W
8
7
6
5
4
3
2
1
ING O V
RET VERT V
ING VERT V
RET O V
PROT.C
VERT.DEF.R
DEF VERT V
NC
ZG-2
8P
WHT-L
:S-MICRO
AL CIRCUITO D
D-2

B-SS342.<ET.>-ZG.


B-O (+)
NC
B-O (-)
NC
PROT
5
4
3
2
1
ZB-20
5P
:VH-L
AL CIRCUITO A
CN0122
ZB
GDF 1F (B)
C1921
330p
2kV
B
C1922
330p
2kV
B
R1921
2.2k
1/2W
:RC
R1922
2.2k
1/2W
:RC
H (B)
V (B)
VM (B)
R1924
560
1/4W
R1923
560
1/4W
9
8
7
6
5
4
3
2
1
ING O B
RET VERT B
ING VERT B
RET O B
PROT.C
VERT.DEF.R
DEF VERT B
NC
NC
ZB-3
9P
WHT-L
:S-MICRO
AL CIRCUITO D
D-3

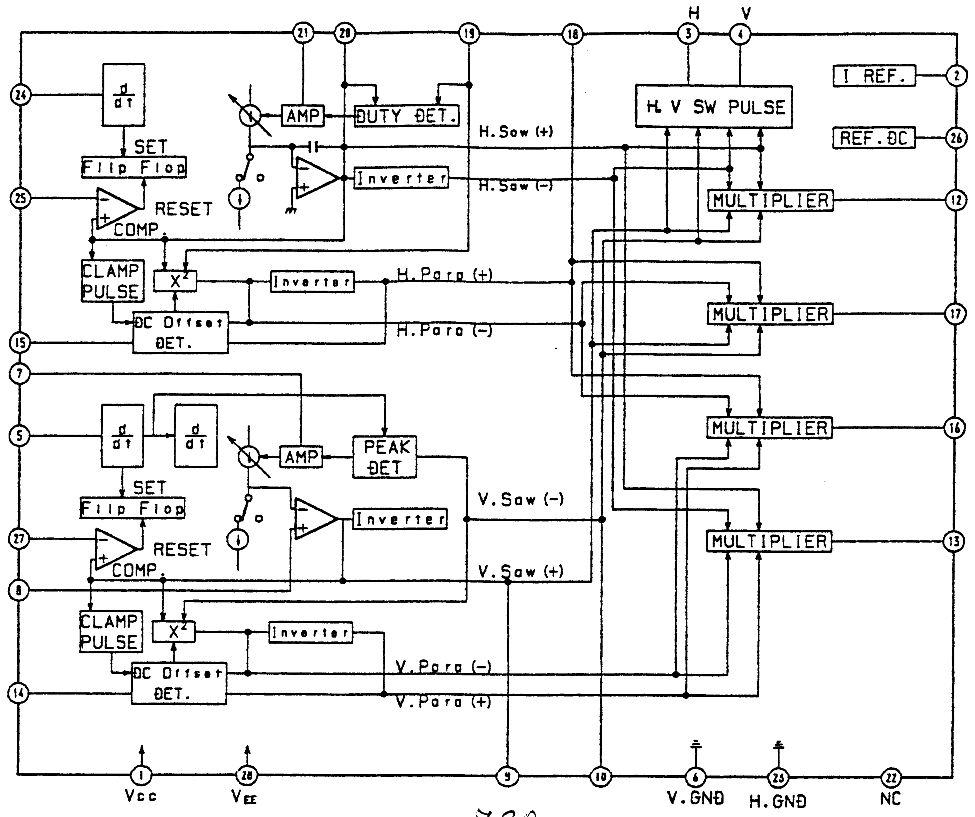
B-SS342.<ET.>-ZB.

K
L
M
N
O
P


B-H (+)
NC
B-H (-)
NC
C.PORT
1 2 3 4 5
ZB-20
5P
:VH-L
TO A BOARD CN0122
ZB
DY 1F (BLUE)
C1921
330p
2kV
B
C1922
330p
2kV
B
R1921
2.2k
1/2W
:RC
R1922
2.2k
1/2W
:RC
H (B)
VM (B)
V (B)
R1923
560
1/4W
R1924
560
1/4W
1 2 3 4 5 6 7 8 9
HB.OUT
VB.RET
VB.OUT
HB.RET
C.PORT
V.DEF.R
VB.DEF
NC
NC
ZB-3
9P
WHT-L
:S-MICRO
TO D BORD D-3

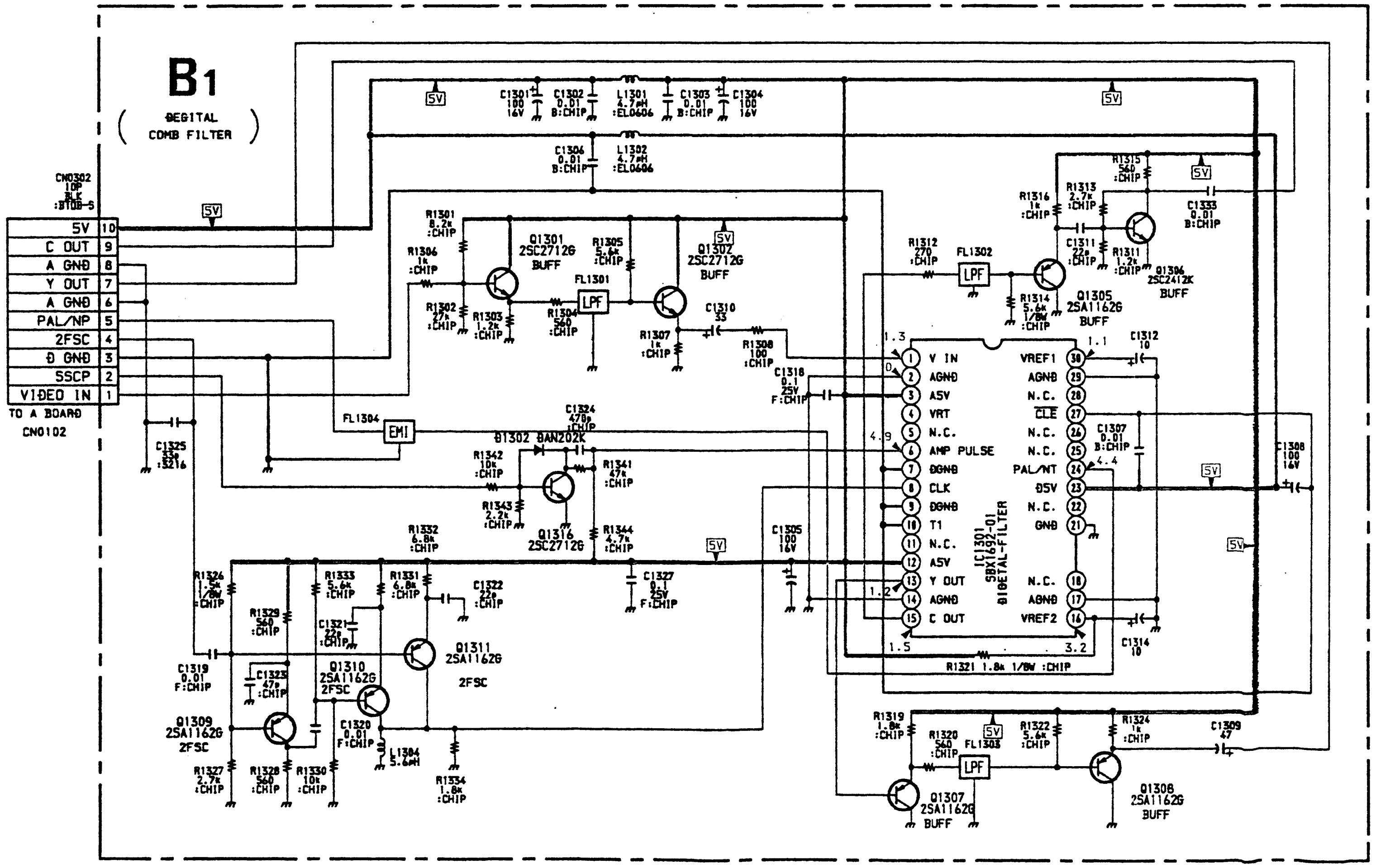
B-SS342.<ET.>-ZB.

D Board IC902 CXA1268P

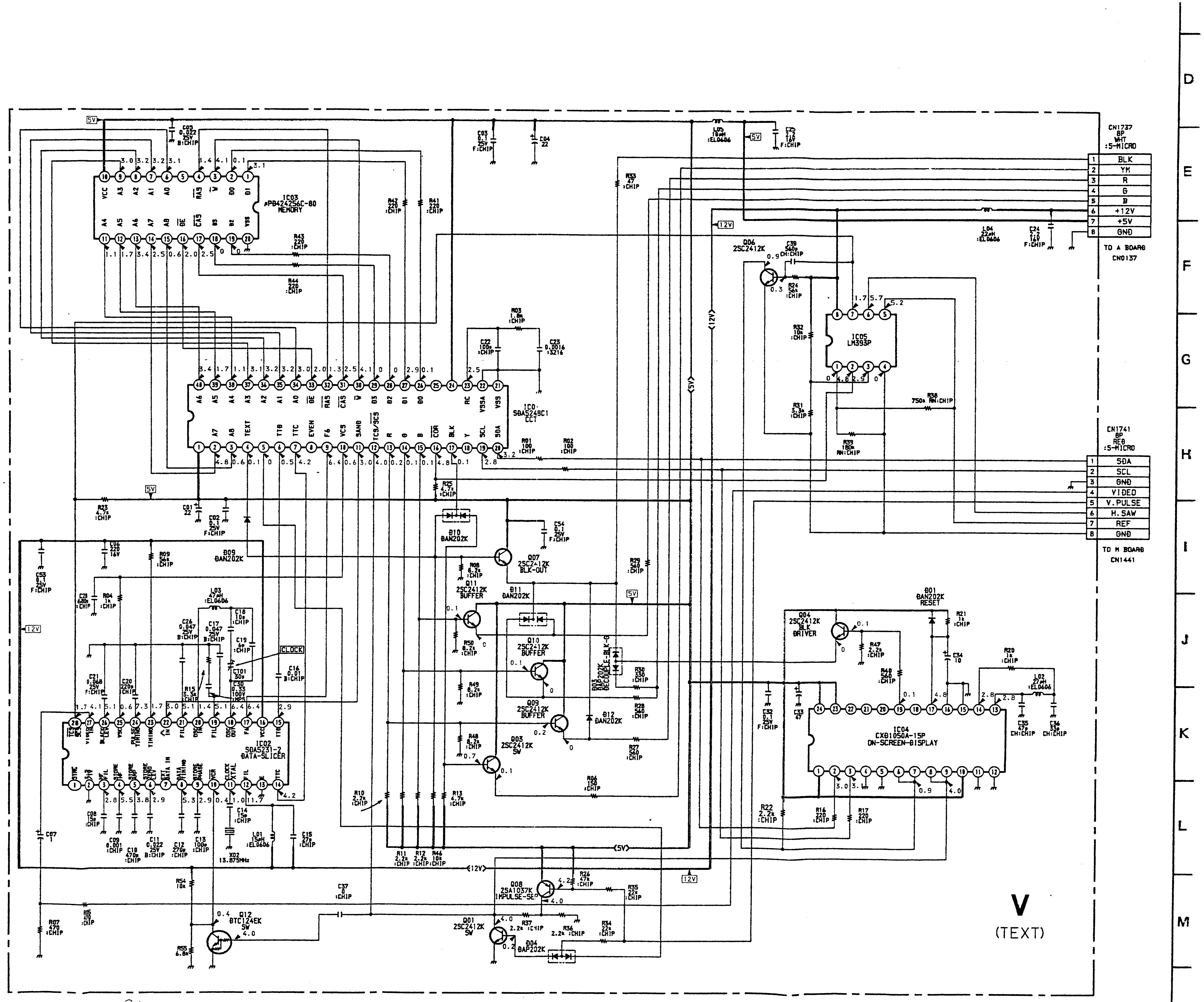

H
V
d/dt
SET
Flip Flop
RESET
COMP
AMP
DUTY DET.
Inverter
H.Saw (+)
H.Saw (-)
H.V SW PULSE
I REF.
REF.DC
MULTIPLIER
CLAMP PULSE
X²
Inverter
H.Para (+)
DC Offset DET.
H.Para (-)
MULTIPLIER
MULTIPLIER
d/dt
d/dt
AMP
PEAK DET
SET
Flip Flop
RESET
COMP
Inverter
V.Saw (-)
V.Saw (+)
MULTIPLIER
CLAMP PULSE
X²
Inverter
V.Para (-)
DC Offset DET.
V.Para (+)
Vcc
VEE
V.GND
H.GND
NC
24
25
15
7
5
27
8
14
21
20
19
18
3
4
2
26
12
17
16
13
1
28
9
10
6
23
22

79A

') Schematic Diagrams of B1 and V Boards

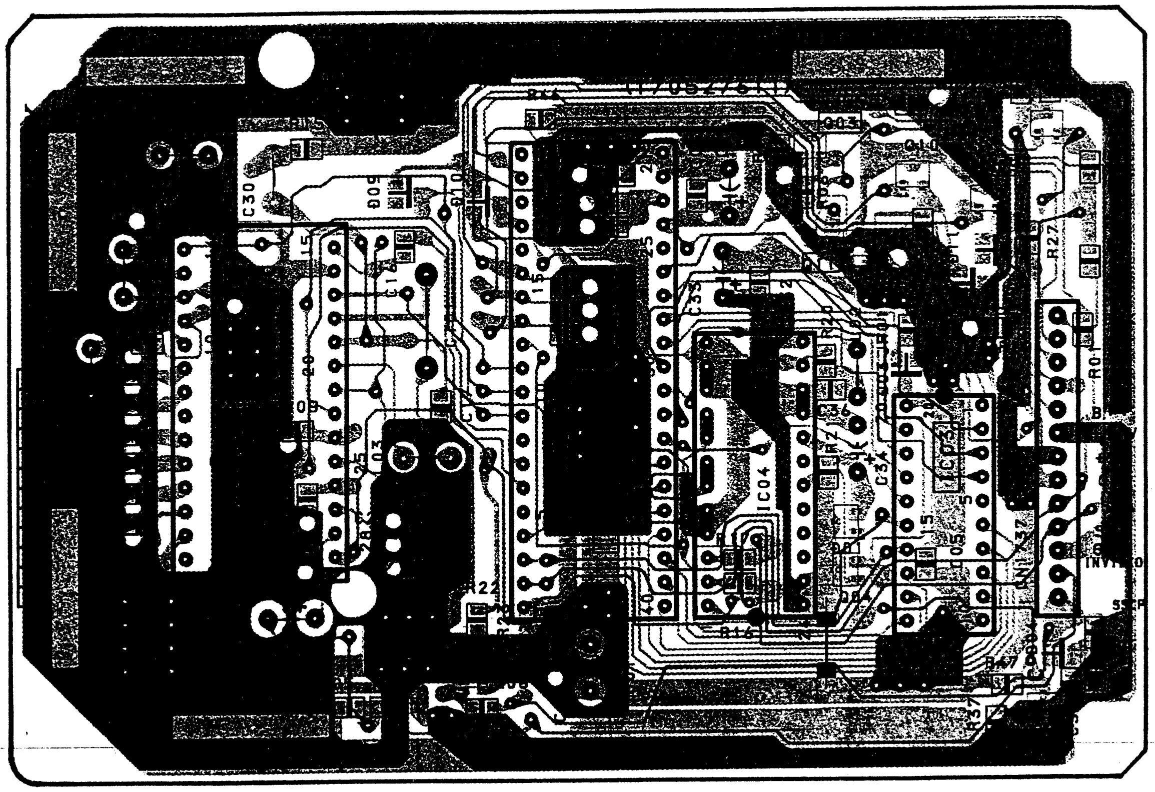

B1
(DEGITAL COMB FILTER)
CN0302
10P
BLK
:BTOB-S
5V 10
C OUT 9
A GND 8
Y OUT 7
A GND 6
PAL/NP 5
2FSC 4
D GND 3
SSCP 2
VIDEO IN 1
TO A BOARD CN0102
5V
C1301 100 16V
C1302 0.01 B:CHIP
L1301 4.7μH :EL0606
C1303 0.01 B:CHIP
C1304 100 16V
C1306 0.01 B:CHIP
L1302 4.7μH :EL0606
R1301 8.2k :CHIP
R1306 1k :CHIP
R1302 27k :CHIP
R1303 1.2k :CHIP
Q1301 2SC2712G BUFF
R1305 5.6k :CHIP
FL1301 LPF
R1304 560 :CHIP
Q1302 2SC2712G BUFF
R1307 1k :CHIP
C1310 33
R1308 100 :CHIP
C1318 0.1 25V F:CHIP
FL1304 EMI
C1324 470p :CHIP
D1302 DAN202K
R1342 10k :CHIP
R1341 47k :CHIP
R1343 2.2k :CHIP
Q1316 2SC2712G
R1344 4.7k :CHIP
C1325 33p :3216
R1332 6.8k :CHIP
R1326 1.5k 1/8W :CHIP
R1333 5.6k :CHIP
R1331 6.8k :CHIP
C1322 22p :CHIP
C1327 0.1 25V F:CHIP
R1329 560 :CHIP
C1321 22p :CHIP
Q1311 2SA1162G 2FSC
C1319 0.01 F:CHIP
C1323 47p :CHIP
Q1310 2SA1162G 2FSC
Q1309 2SA1162G 2FSC
C1320 0.01 F:CHIP
L1304 5.6μH
R1327 2.7k :CHIP
R1328 560 :CHIP
R1330 10k :CHIP
R1334 1.8k :CHIP
C1305 100 16V
R1312 270 :CHIP
FL1302 LPF
R1314 5.6k 1/8W :CHIP
Q1305 2SA1162G BUFF
R1316 1k :CHIP
R1313 2.7k :CHIP
R1315 560 :CHIP
C1311 22p :CHIP
R1311 1.2k :CHIP
Q1306 2SC2412K BUFF
C1333 0.01 B:CHIP
C1312 10
IC1301 SBX1692-01 DIGETAL-FILTER
1 V IN
2 AGND
3 A5V
4 VRT
5 N.C.
6 AMP PULSE
7 DGND
8 CLK
9 DGND
10 T1
11 N.C.
12 A5V
13 Y OUT
14 AGND
15 C OUT
30 VREF1
29 AGND
28 N.C.
27 CLE
26 N.C.
25 N.C.
24 PAL/NT
23 D5V
22 N.C.
21 GND
18 N.C.
17 AGND
16 VREF2
1.3
0
4.9
1.2
1.5
3.2
1.1
4.4
C1307 0.01 B:CHIP
C1308 100 16V
C1314 10
R1321 1.8k 1/8W :CHIP
R1319 1.8k :CHIP
R1320 560 :CHIP
FL1303 LPF
R1322 5.6k :CHIP
R1324 1k :CHIP
C1309 47
Q1307 2SA1162G BUFF
Q1308 2SA1162G BUFF

B-SS342.<ET.>-B1.

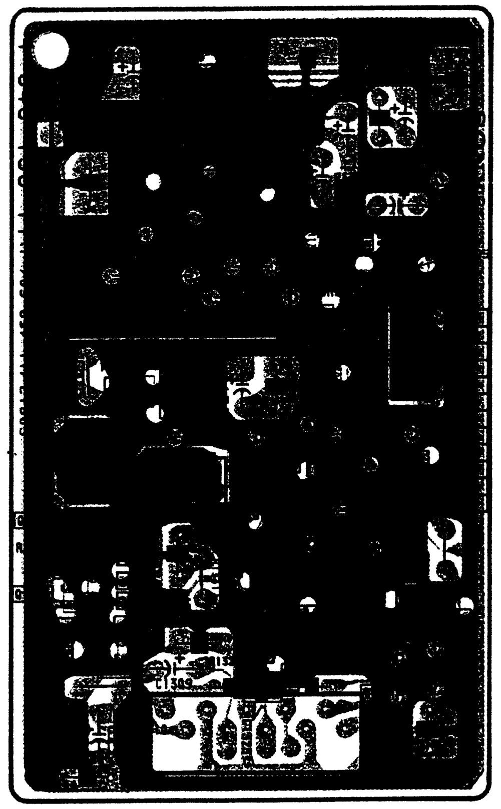

V
(TEXT)
IC03
μPD424256C-80
MEMORY
IC01
SDA5248C1
CCT
IC02
SDA5231-2
DATA-SLICER
IC04
CXD1050A-15P
ON-SCREEN-DISPLAY
IC05
LM393P
Q07
2SC2412K
BLK-OUT
Q11
2SC2412K
BUFFER
Q10
2SC2412K
BUFFER
Q09
2SC2412K
BUFFER
Q03
2SC2412K
SW
Q04
2SC2412K
BLK
DRIVER
Q06
2SC2412K
Q08
2SA1037K
IMPULSE-SEP
Q01
2SC2412K
SW
Q12
DTC124EK
SW
D01
DAN202K
RESET
D09
DAN202K
D10
DAN202K
D11
DAN202K
D12
DAN202K
D03
DAN202K
DECOUPLE-BLK-G
D04
DAP202K
X02
13.875MHz
CLOCK
CN1737
8P
WHT
:S-MICRO
1 BLK
2 YM
3 R
4 G
5 B
6 +12V
7 +5V
8 GND
TO A BOARD
CN0137
CN1741
8P
RED
:S-MICRO
1 SDA
2 SCL
3 GND
4 VIDEO
5 V.PULSE
6 H.SAW
7 REF
8 GND
TO M BOARD
CN1441
5V
12V
D
E
F
G
H
I
J
K
L
M
N

B1 [DEGITAL COMB FILTER] **V** [TEXT] **ZR** [DY 1F (RED)] **ZG** [DY 1F (GREEN)] **ZB** [DY 1F (BLUE)]

– V Board –

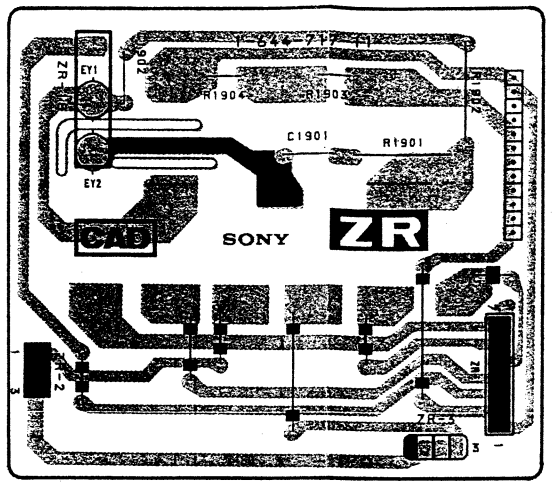

C30
IC04
R27
R22
C34
C35

– B1 Board –

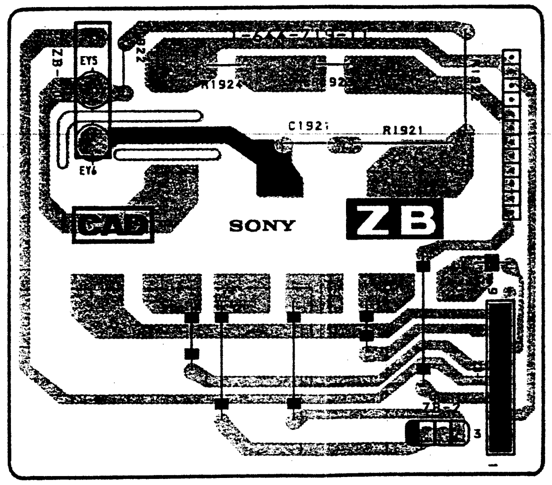


- ▒ : Pattern from the side which enables seeing.
- ▒ : Pattern of the rear side.

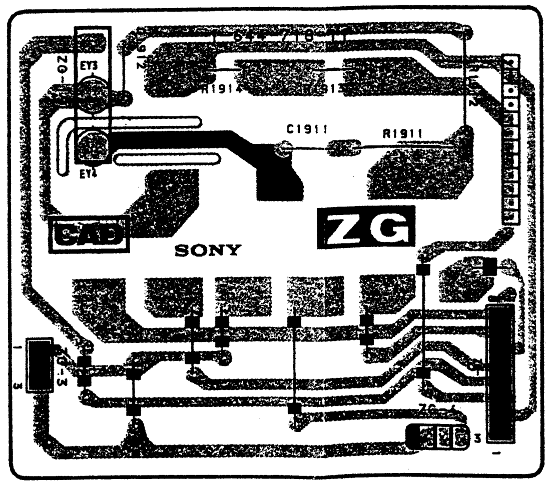
– ZR Board –


EY1
EY2
R1904
R1903
C1901
R1901
CAD
SONY
ZR

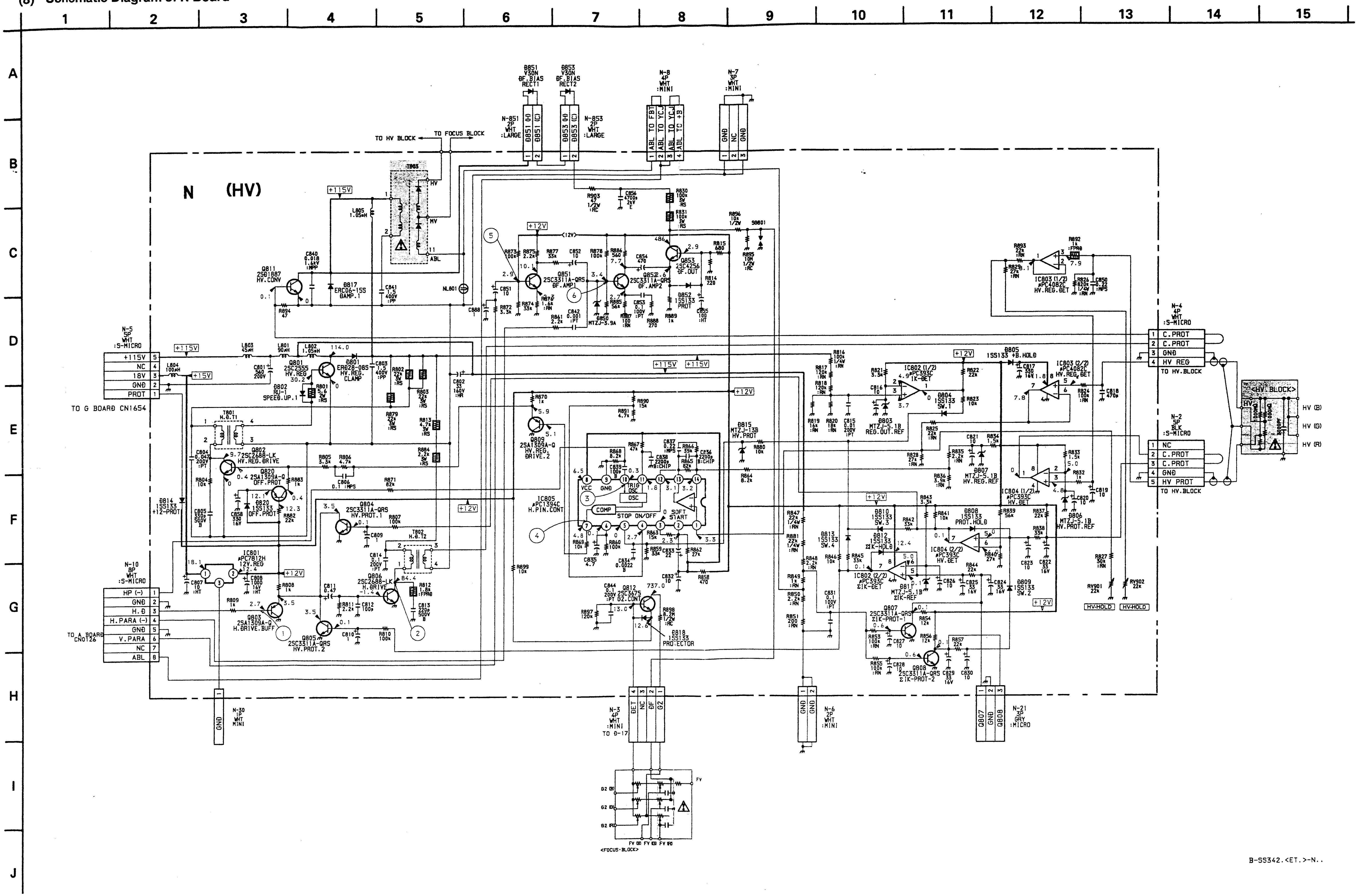
– ZG Board –


EY5
EY6
R1924
C1921
R1921
CAD
SONY
ZB

– ZB Board –


EY3
EY4
R1914
C1911
R1911
CAD
SONY
ZG

(8) Schematic Diagram of N Board


1
2
3
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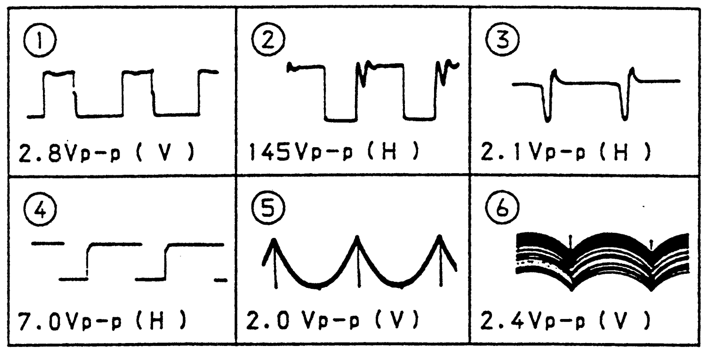
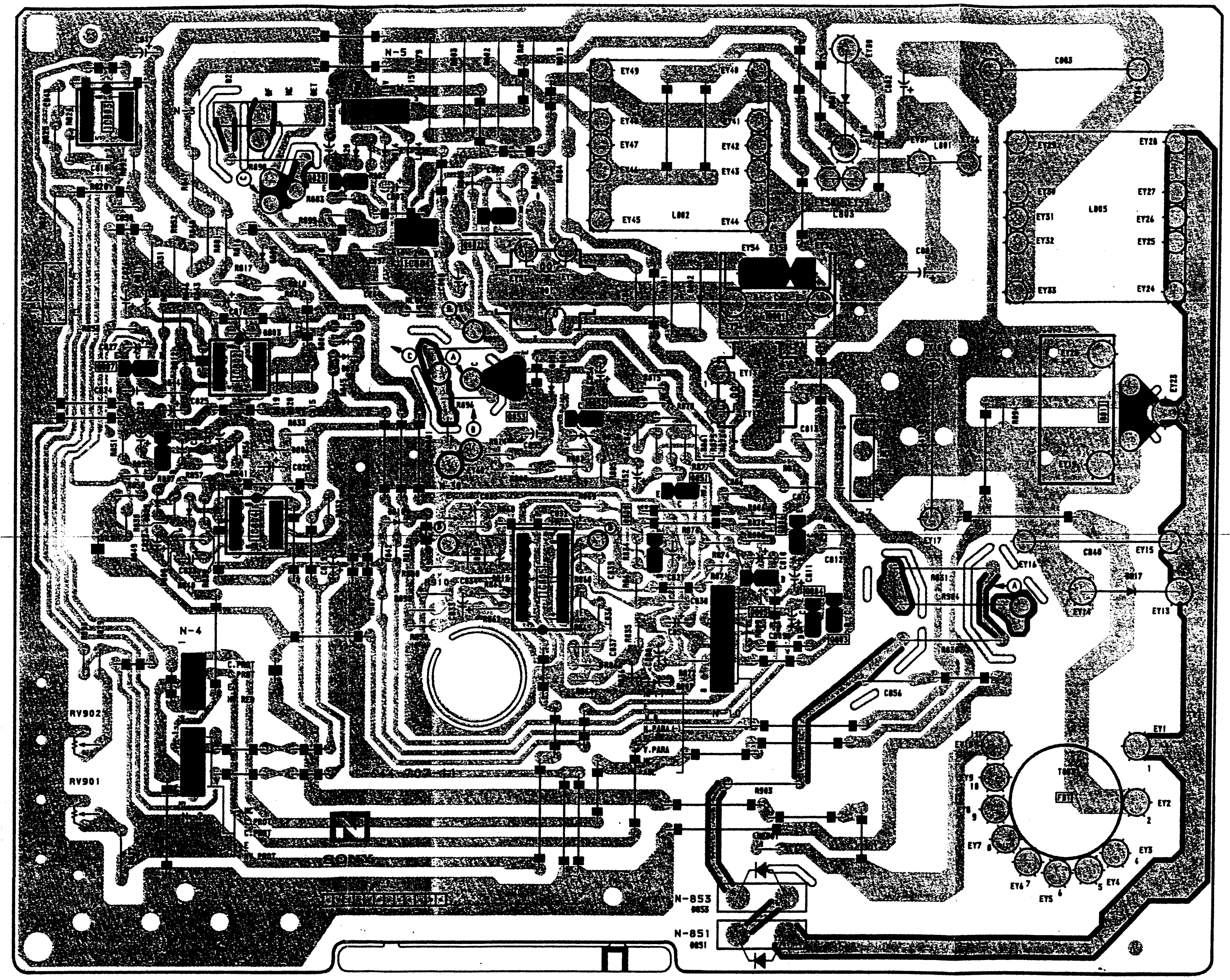
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
N (HV)
TO HV BLOCK
TO FOCUS BLOCK
+115V
+12V
+15V
D851 V30N DF.BIAS RECT1
D853 V30N DF.BIAS RECT2
N-851 2P WHT :LARGE
N-853 2P WHT :LARGE
N-8 4P WHT :MINI
N-7 3P WHT :MINI
ABL TO FBT
ABL TO YC
ABL TO +B
GND
NC
T803
HV
MV
ABL
N-5 5P WHT :S-MICRO
+115V
NC
18V
GND
PROT
TO G BOARD CN1654
N-10 8P WHT :S-MICRO
HP (-)
GND
H.D
H.PARA (-)
V.PARA
ABL
TO A BOARD CN0126
Q811 2SD1887 HV.CONV
D817 ERC06-15S DAMP.1
Q801 2SC2555 HV.REG
D801 ERD28-08S HV.REG. CLAMP
D802 RU-1 SPEED.UP.1
T801 H.D.T1
Q802 2SC2688-LK HV.REG.DRIVE
Q820 2SA1309A-Q OFF.PROT
D820 1SS133 OFF.PROT
D814 1SS133 +12-PROT
IC801 μPC7812H 12V.REG
Q803 2SA1309A-Q H.DRIVE.BUFF
Q805 2SC3311A-QRS HV.PROT.2
Q804 2SC3311A-QRS HV.PROT.1
T802 H.D.T2
Q806 2SC2688-LK H.DRIVE
Q851 2SC3311A-QRS DF.AMP1
Q852 2SC3311A-QRS DF.AMP2
Q853 2SC4256 DF.OUT
D852 1SS133 PROT
D850 MTZJ-5.9A
Q809 2SA1309A-Q HV.REG. DRIVE.2
IC805 μPC1394C H.PIN.CONT
VCC
GND
TRIG OSC
OSC
COMP
STOP ON/OFF
SOFT START
D815 MTZJ-13B HV.PROT
Q812 2SC3675 G2.CONT
D818 1SS133 PROTECTOR
IC802 (1/2) μPC393C IK-DET
D804 1SS133 SW.1
D803 MTZJ-5.1B REG.OUT.REF
D805 1SS133 +B.HOLD
IC803 (2/2) μPC4082C HV.REG.DET
IC803 (1/2) μPC4082C HV.REG.DET
D807 MTZJ-5.1B HV.REG.REF
IC804 (1/2) μPC393C HV.DET
D806 MTZJ-5.1B HV.PROT.REF
D808 1SS133 PROT.HOLD
D810 1SS133 SW.3
D812 1SS133 ΣIK-HOLD
D813 1SS133 SW.4
IC804 (2/2) μPC393C HV.DET
IC802 (2/2) μPC393C ΣIK-DET
D811 MTZJ-5.1B ΣIK-REF
D809 1SS133 SW.2
Q807 2SC3311A-QRS ΣIK-PROT-1
Q808 2SC3311A-QRS ΣIK-PROT-2
RV901 22k HV-HOLD
RV902 22k HV-HOLD
N-4 4P WHT :S-MICRO
C.PROT
HV REG
TO HV.BLOCK
N-2 5P BLK :S-MICRO
HV PROT
<HV.BLOCK>
HV (B)
HV (G)
HV (R)
N-30 1P WHT MINI
N-3 4P WHT :MINI TO D-17
DET
DF
G2
N-6 2P WHT :MINI
N-21 3P GRY :MICRO
Q807
Q808
G2 (B)
G2 (G)
G2 (R)
FV
FV (B) FV (G) FV (R)
<FOCUS·BLOCK>
B-SS342.<ET.>-N..

N [HV]

N BOARD WAVEFORMS

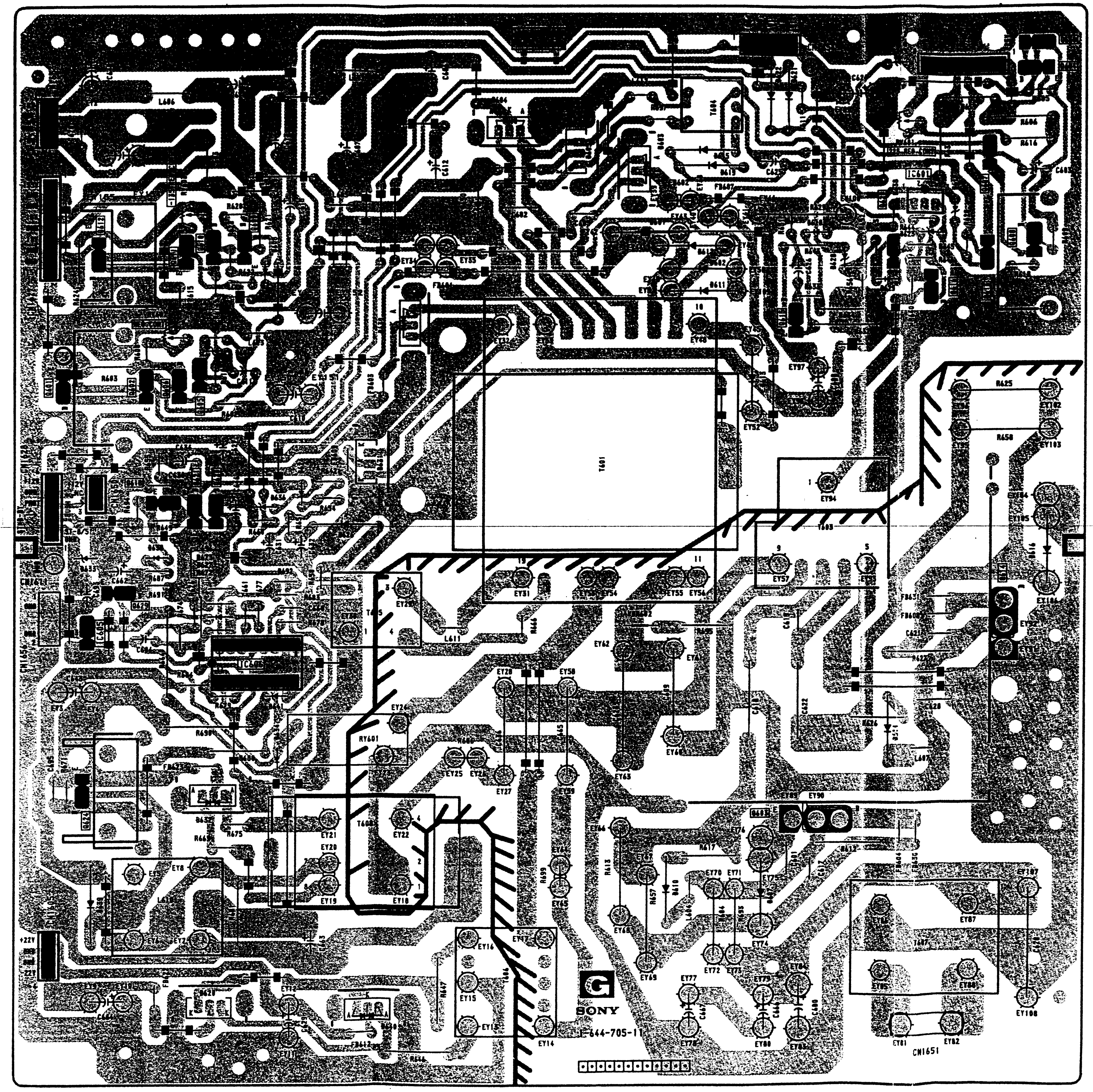


– N Board –

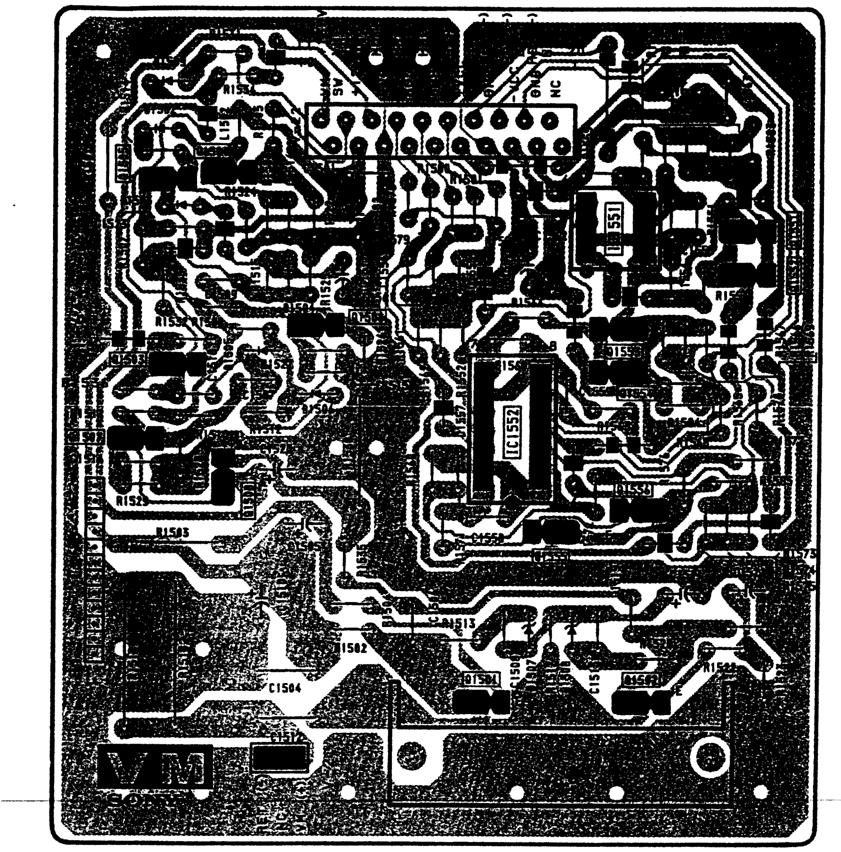

N-5
N-4
RV902
RV901
N-853
N-851
C803
L801
L802
L805
EY1
EY2
EY3
EY4
EY5
EY6
EY7
EY13
EY15
EY16
EY17
EY22
EY24
EY25
EY26
EY27
EY28
EY31
EY32
EY33
EY41
EY42
EY43
EY44
EY45
EY47
EY49
C840
C812
C856
R883
T803

G [POWER SUPPLY] **VM** [VM AMP] **Ds** [SIN, WAVE, GEN]

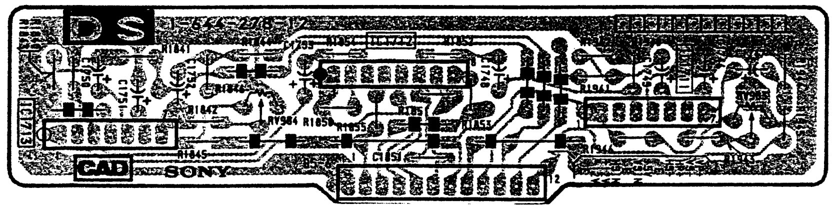
– G Board –


T601
T603
T604
T605
RY601
L611
IC601
IC602
IC604
CN1651
+22V
SONY
1-644-705-11
G

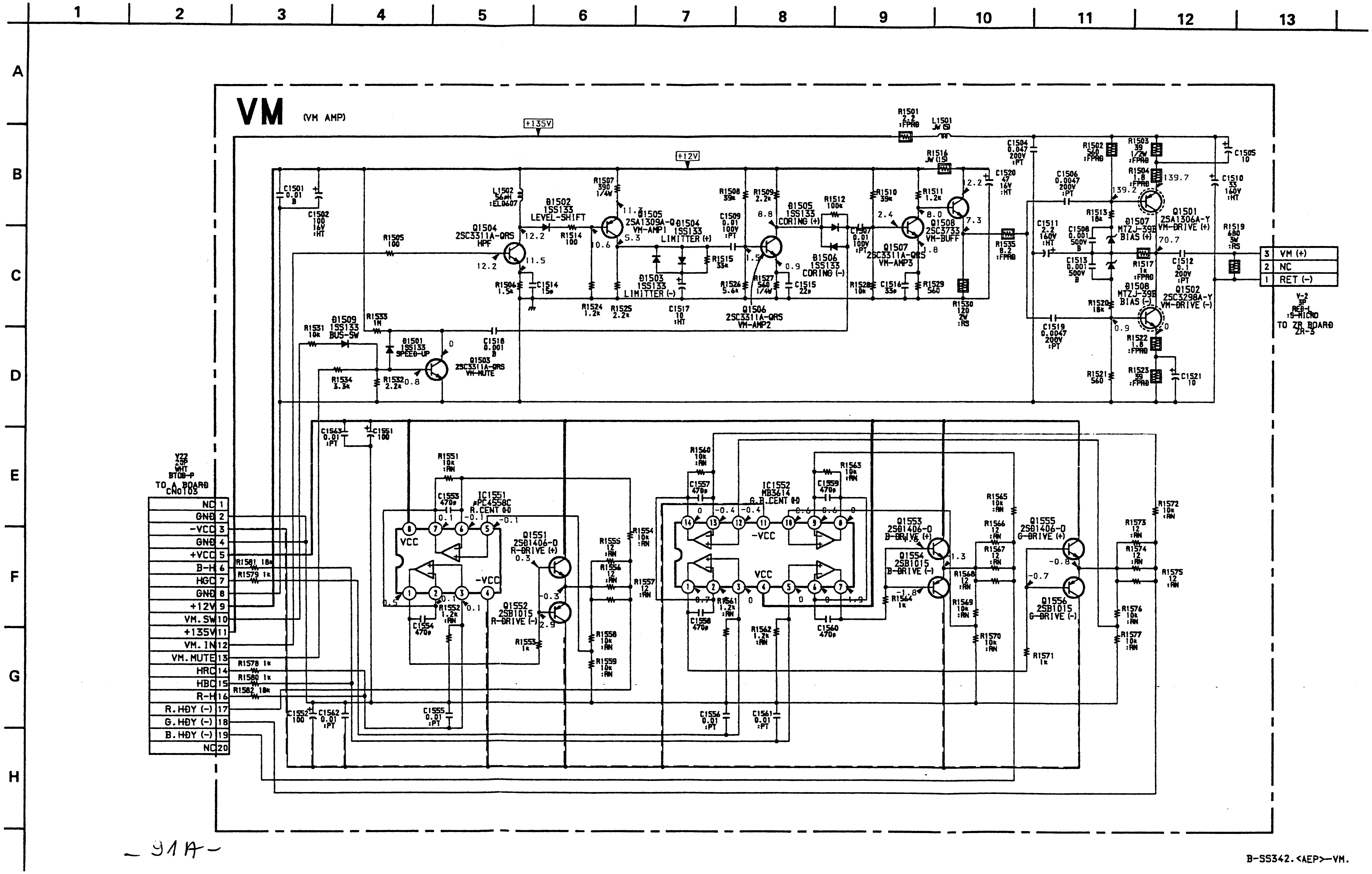
– VM Board –


IC1551
IC1552
C1504
R1502
R1513
R1585
VM

– DS Board –



(9) Schematic Diagrams of VM, DS and G Boards


1
2
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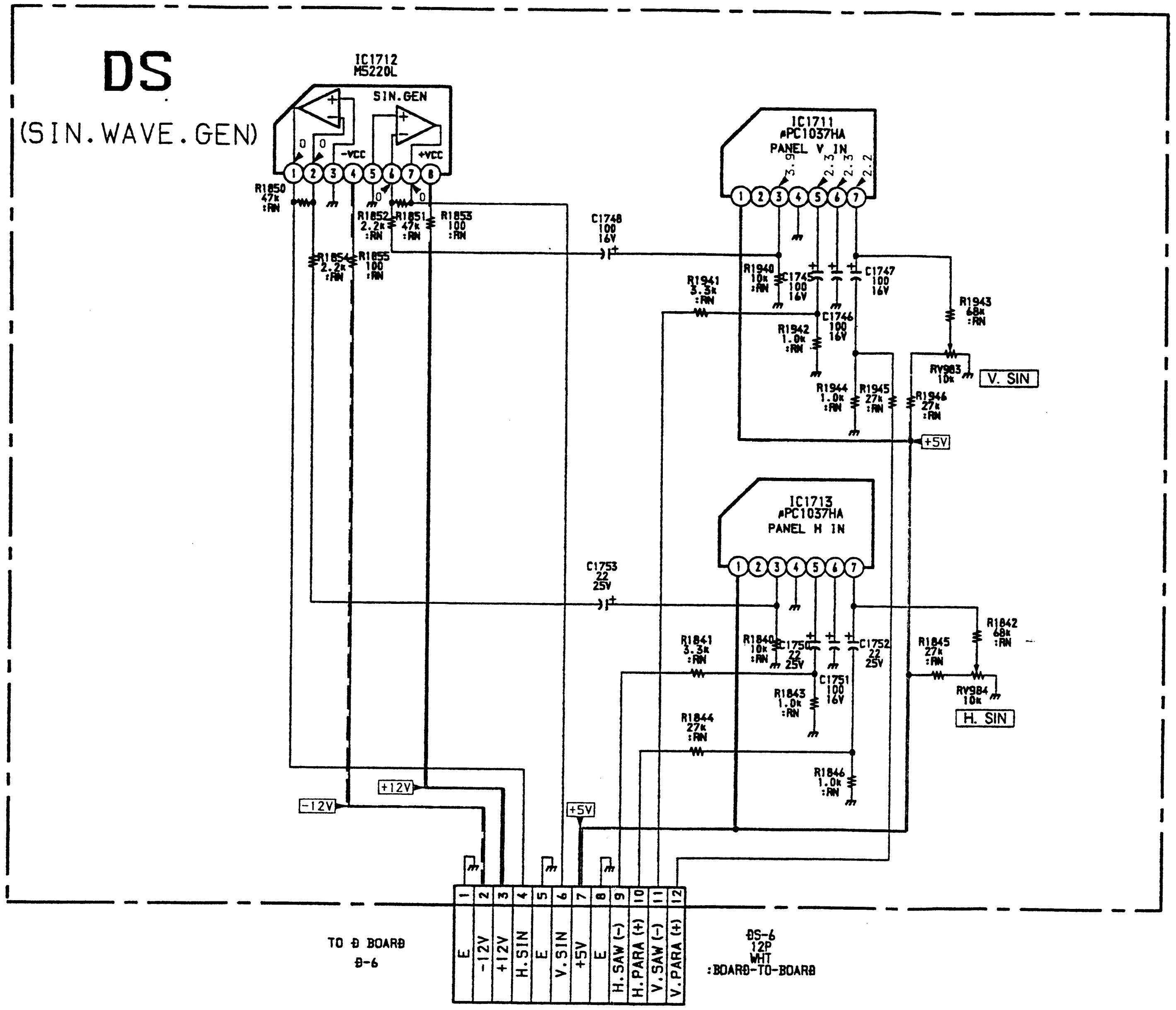
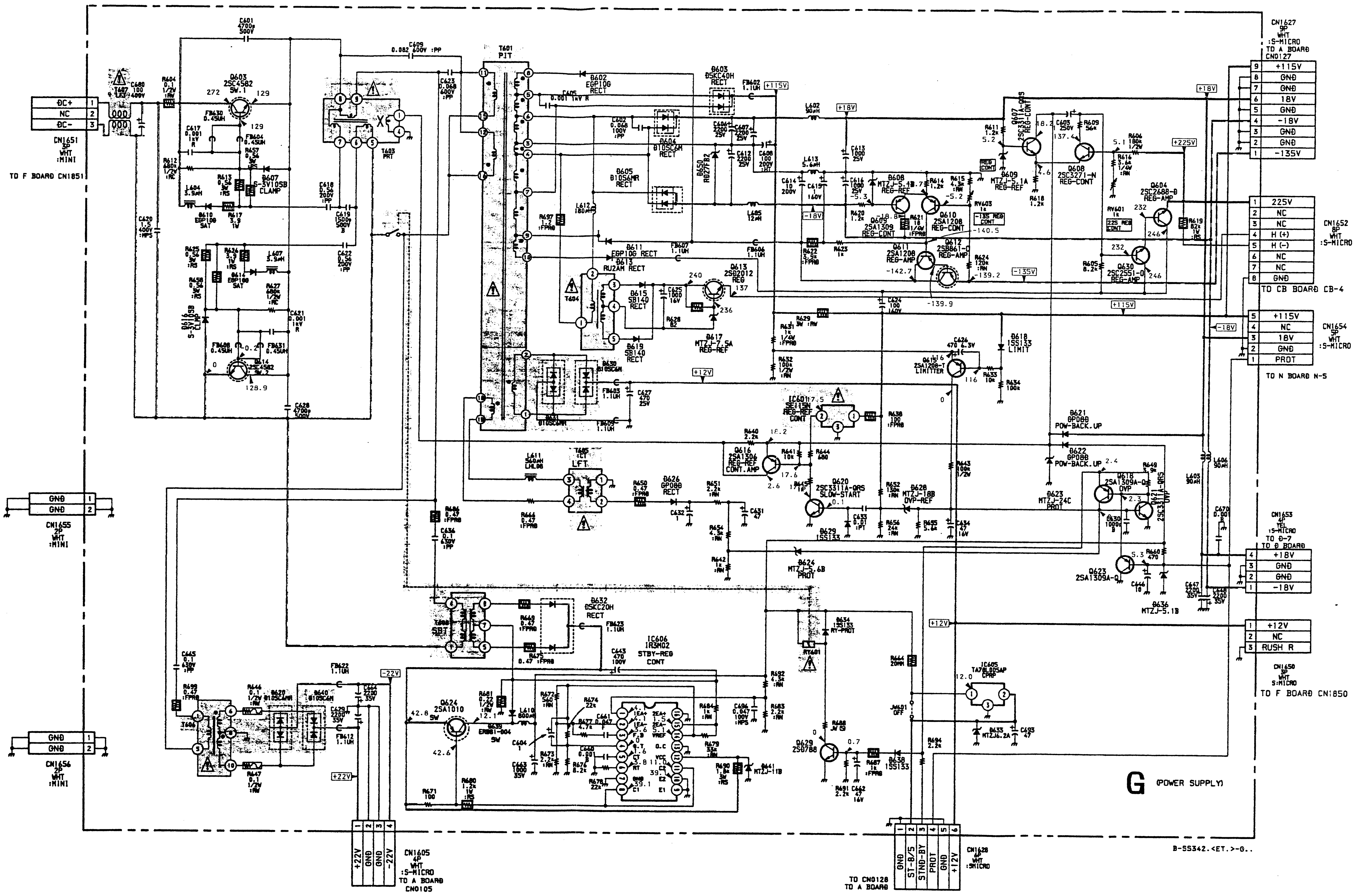
9
10
11
12
13
A
B
C
D
E
F
G
H
VM (VM AMP)
+135V
+12V
R1501 2.2 :FPRB
L1501 JW 69
C1504 0.047 200V :PT
R1502 560 :FPRB
R1503 39 1/2W :FPRB
C1505 10
R1516 JW (15)
C1520 47 16V :HT
C1506 0.0047 200V :PT
R1504 1.8 :FPRB
C1510 33 160V :HT
Q1501 2SA1306A-Y VM-DRIVE (+)
R1513 18k
D1507 MTZJ-39B BIAS (+)
R1519 680 3W :RS
C1501 0.01 B
C1502 100 16V :HT
L1502 56µH :EL0607
R1507 390 1/4W
D1502 1SS133 LEVEL-SHIFT
Q1505 2SA1309A-Q VM-AMP1
D1504 1SS133 LIMITTER (+)
R1508 39k
R1509 2.2k
D1505 1SS133 CORING (+)
R1512 100k
R1510 39k
R1511 1.2k
Q1508 2SC3733 VM-BUFF
C1509 0.01 100V :PT
R1505 100
Q1504 2SC3311A-QRS HPF
R1514 100
C1507 0.01 100V :PT
Q1507 2SC3311A-QRS VM-AMP3
D1506 1SS133 CORING (-)
R1515 33k
D1503 1SS133 LIMITTER (-)
R1526 5.6k
R1527 560 1/4W
C1515 22p
R1528 10k
C1516 33p
R1529 560
R1535 8.2 :FPRB
C1511 2.2 160V :HT
C1508 0.001 500V B
C1513 0.001 500V B
R1517 1k :FPRB
C1512 0.1 200V :PT
D1508 MTZJ-39B BIAS (-)
Q1502 2SC3298A-Y VM-DRIVE (-)
R1506 1.5k
C1514 15p
R1524 1.2k
R1525 2.2k
C1517 10 :HT
Q1506 2SC3311A-QRS VM-AMP2
R1530 120 2W :RS
R1520 18k
C1519 0.0047 200V :PT
R1522 1.8 :FPRB
R1521 560
R1523 39 :FPRB
C1521 10
VM (+)
NC
RET (-)
V-2 3P RCB-L :S-MICRO TO ZR BOARD ZR-5
D1509 1SS133 BUS-SW
R1531 10k
R1533 1M
D1501 1SS133 SPEED-UP
C1518 0.001 B
Q1503 2SC3311A-QRS VM-MUTE
R1534 3.3k
R1532 2.2k
C1563 0.01 :PT
C1551 100
YZ2 20P WHT BTOB-P TO A BOARD CN0103
NC
GND
-VCC
GND
+VCC
B-H
HGC
GND
+12V
VM. SW
+135V
VM. IN
VM. MUTE
HRC
HBC
R-H
R. HDY (-)
G. HDY (-)
B. HDY (-)
NC
R1581 18k
R1579 1k
R1578 1k
R1580 1k
R1582 18k
R1551 10k :RN
C1553 470p
IC1551 µPC4558C R.CENT 0-D
VCC
-VCC
Q1551 2SB1406-O R-DRIVE (+)
Q1552 2SB1015 R-DRIVE (-)
R1552 1.2k :RN
C1554 470p
R1553 1k
R1554 10k :RN
R1555 12 :RN
R1556 12 :RN
R1557 12 :RN
R1558 10k :RN
R1559 10k :RN
C1552 100
C1562 0.01 :PT
C1555 0.01 :PT
R1560 10k :RN
C1557 470p
IC1552 MB3614 G.B.CENT 0-D
C1559 470p
R1563 10k :RN
-VCC
VCC
R1561 1.2k :RN
C1558 470p
R1562 1.2k :RN
C1560 470p
Q1553 2SB1406-O B-DRIVE (+)
Q1554 2SB1015 B-DRIVE (-)
R1564 1k
R1565 10k :RN
R1566 12 :RN
R1567 12 :RN
R1568 12 :RN
R1569 10k :RN
R1570 10k :RN
Q1555 2SB1406-O G-DRIVE (+)
Q1556 2SB1015 G-DRIVE (-)
R1571 1k
R1572 10k :RN
R1573 12 :RN
R1574 12 :RN
R1575 12 :RN
R1576 10k :RN
R1577 10k :RN
C1556 0.01 :PT
C1561 0.01 :PT

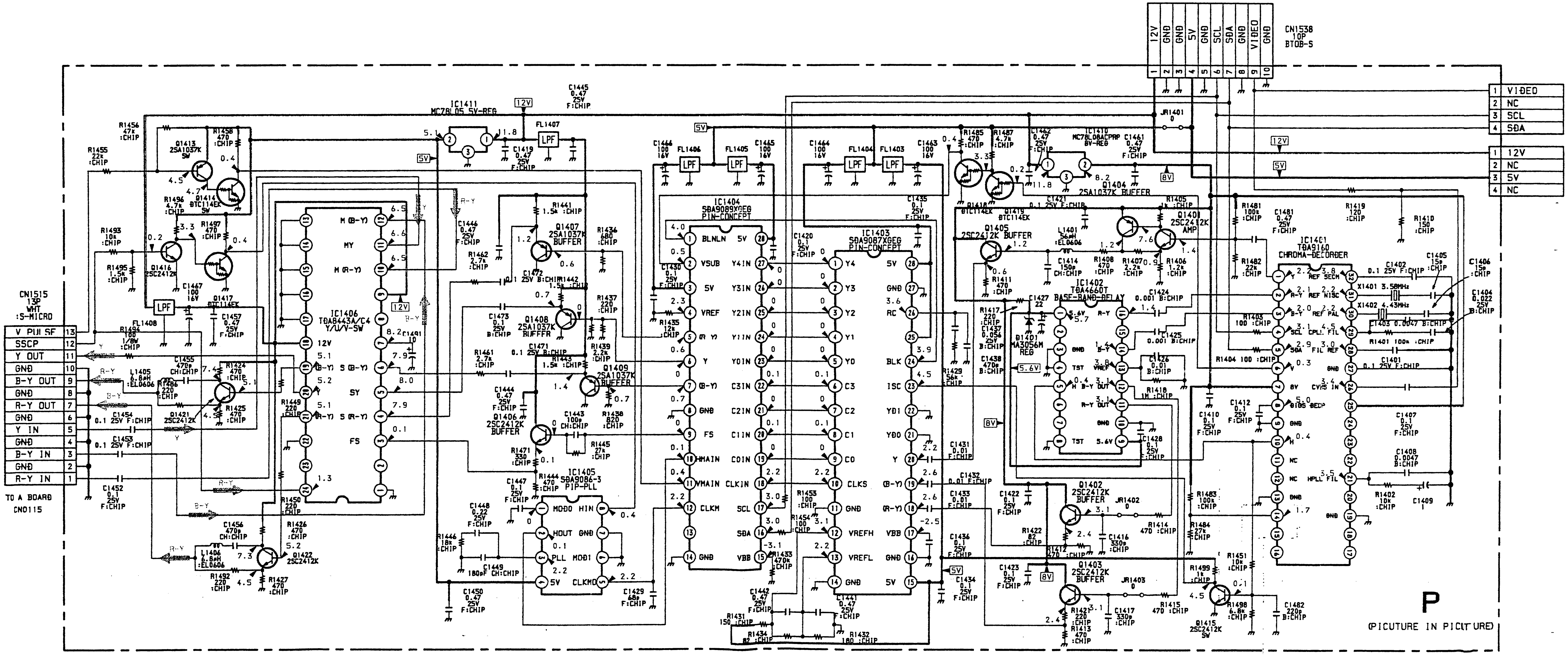
– 91A –


DS
(SIN.WAVE.GEN)
IC1712
M5220L
SIN.GEN
-VCC
+VCC
0
R1850 47k :RN
R1852 2.2k :RN
R1851 47k :RN
R1853 100 :RN
R1854 2.2k :RN
R1855 100 :RN
C1748 100 16V
IC1711
µPC1037HA
PANEL V IN
3.9
2.3
2.3
2.2
R1940 10k :RN
C1745 100 16V
C1747 100 16V
R1941 3.3k :RN
C1746 100 16V
R1942 1.0k :RN
R1943 68k :RN
RV983 10k
V. SIN
R1944 1.0k :RN
R1945 27k :RN
R1946 27k :RN
+5V
IC1713
µPC1037HA
PANEL H IN
C1753 22 25V
R1841 3.3k :RN
R1840 10k :RN
C1750 22 25V
C1752 22 25V
C1751 100 16V
R1843 1.0k :RN
R1845 27k :RN
R1842 68k :RN
RV984 10k
H. SIN
R1844 27k :RN
R1846 1.0k :RN
-12V
+12V
+5V
1 E
2 -12V
3 +12V
4 H.SIN
5 E
6 V.SIN
7 +5V
8 E
9 H.SAW (-)
10 H.PARA (+)
11 V.SAW (-)
12 V.PARA (+)
TO D BOARD
D-6
DS-6
12P
WHT
:BOARD-TO-BOARD


CN1651 3P WHT :MINI
DC+
NC
DC-
TO F BOARD CN1851
CN1655 2P WHT :MINI
GND
GND
CN1656 2P WHT :MINI
T601 PIT
T603 PRT
T604
T605 :CT LFT
T606
T608 SBT
Q603 2SC4582 SW.1
Q614 2SC4582 SW.2
Q613 2SD2012 REG
Q624 2SA1010 SW
IC601 SE115N REG-REF CONT
IC605 TA78L005AP
IC606 IR3M02 STBY-REG CONT
RY601
CN1627 9P WHT :S-MICRO TO A BOARD CN0127
+115V
GND
GND
18V
GND
-18V
GND
GND
-135V
CN1652 8P WHT :S-MICRO
225V
NC
NC
H (+)
H (-)
NC
NC
GND
TO CB BOARD CB-4
CN1654 5P WHT :S-MICRO
+115V
NC
18V
GND
PROT
TO N BOARD N-5
CN1653 4P YEL :S-MICRO TO D-7 TO D BOARD
+18V
GND
GND
-18V
CN1650 3P WHT S:MICRO TO F BOARD CN1850
+12V
NC
RUSH R
CN1605 4P WHT :S-MICRO TO A BOARD CN0105
+22V
GND
GND
-22V
CN1628 6P WHT :S:MICRO TO CN0128 TO A BOARD
GND
ST-B/S
STND-BY
PROT
GND
+12V
G (POWER SUPPLY)
B-SS342.<ET.>-G..

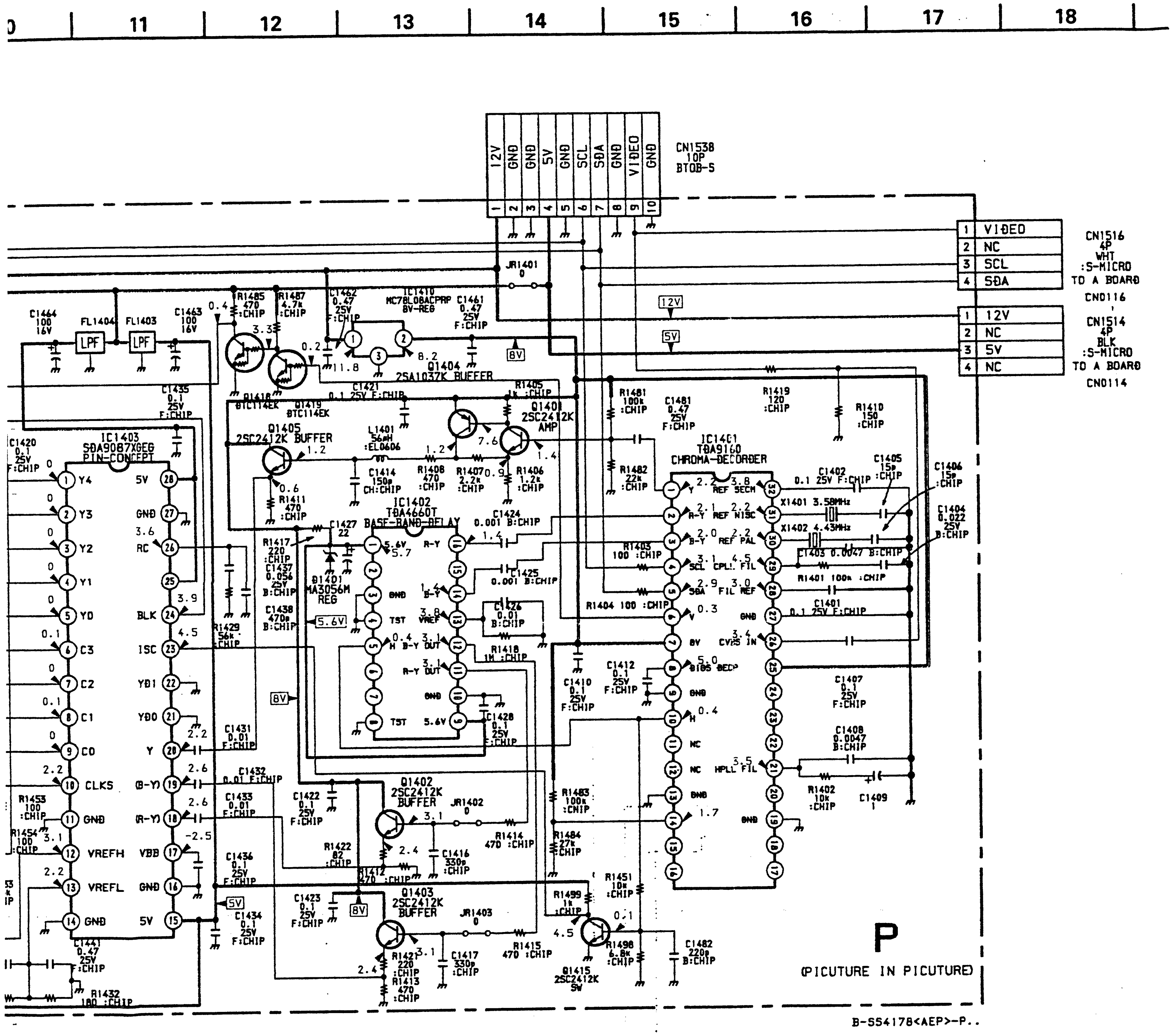
Schematic Diagrams of CR, CG, CB and P Boards (10)

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 1


CN1515 13P WHT :S-MICRO
V PULSE
SSCP
Y OUT
GND
B-Y OUT
GND
R-Y OUT
GND
Y IN
GND
B-Y IN
GND
R-Y IN
TO A BOARD CN0115
IC1406 TDA8443A/C4 Y/U/V-SW
IC1411 MC78L05 5V-REG
IC1405 SDA9086-3 PIP-PLL
IC1404 SDA9089XGEG PIP-CONCEPT
IC1403 SDA9087XGEG PIP-CONCEPT
IC1410 MC78L08ACPRP 8V-REG
IC1402 TDA4660T BASE-BAND-DELAY
IC1401 TDA9160 CHROMA-DECODER
Q1407 2SA1037K BUFFER
Q1408 2SA1037K BUFFER
Q1409 2SA1037K BUFFER
Q1406 2SC2412K BUFFER
Q1404 2SA1037K BUFFER
Q1405 2SC2412K BUFFER
Q1401 2SC2412K AMP
Q1402 2SC2412K BUFFER
Q1403 2SC2412K BUFFER
D1401 MA3056M REG
X1401 3.58MHz
X1402 4.43MHz
CN1538 10P BTOB-5
12V
GND
GND
5V
GND
SCL
SDA
GND
VIDEO
GND
VIDEO
NC
SCL
SDA
12V
NC
5V
NC
P
(PICTURE IN PICTURE)

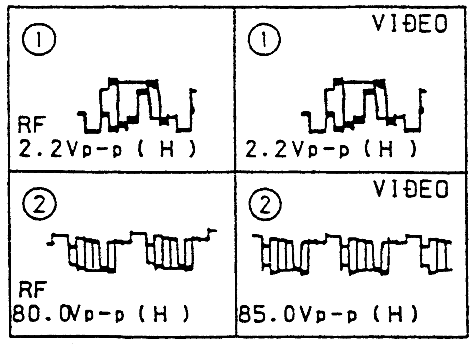
- 95 A -

B-SS4178<AE>-P..

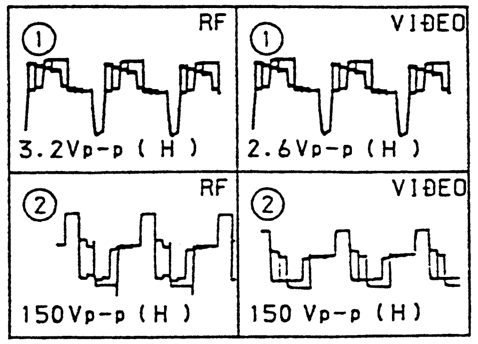

11
12
13
14
15
16
17
18
CN1538 10P BTOB-S
12V GND GND 5V GND SCL SDA GND VIDEO GND
CN1516 4P WHT :S-MICRO TO A BOARD CN0116
VIDEO NC SCL SDA
CN1514 4P BLK :S-MICRO TO A BOARD CN0114
12V NC 5V NC
IC1403 SDA9087XGEG PIP-CONCEPT
IC1402 TDA4660T BASE-BAND-DELAY
IC1401 TDA9160 CHROMA-DECORDER
IC1410 MC78L08ACPRP 8V-REG
Q1404 2SA1037K BUFFER
Q1405 2SC2412K BUFFER
Q1401 2SC2412K AMP
Q1402 2SC2412K BUFFER
Q1403 2SC2412K BUFFER
Q1415 2SC2412K SW
D1401 MA3056M REG
X1401 3.58MHz
X1402 4.43MHz
P
(PICUTURE IN PICUTURE)

B-S54178<AEP>-P..

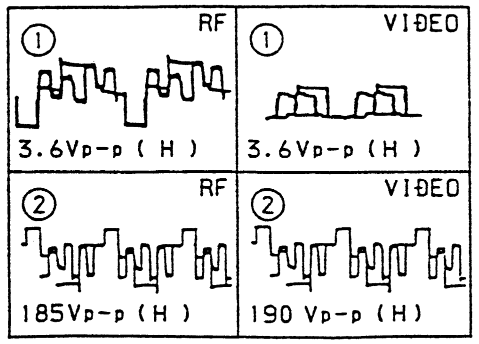
CR BOARD WAVEFORMS

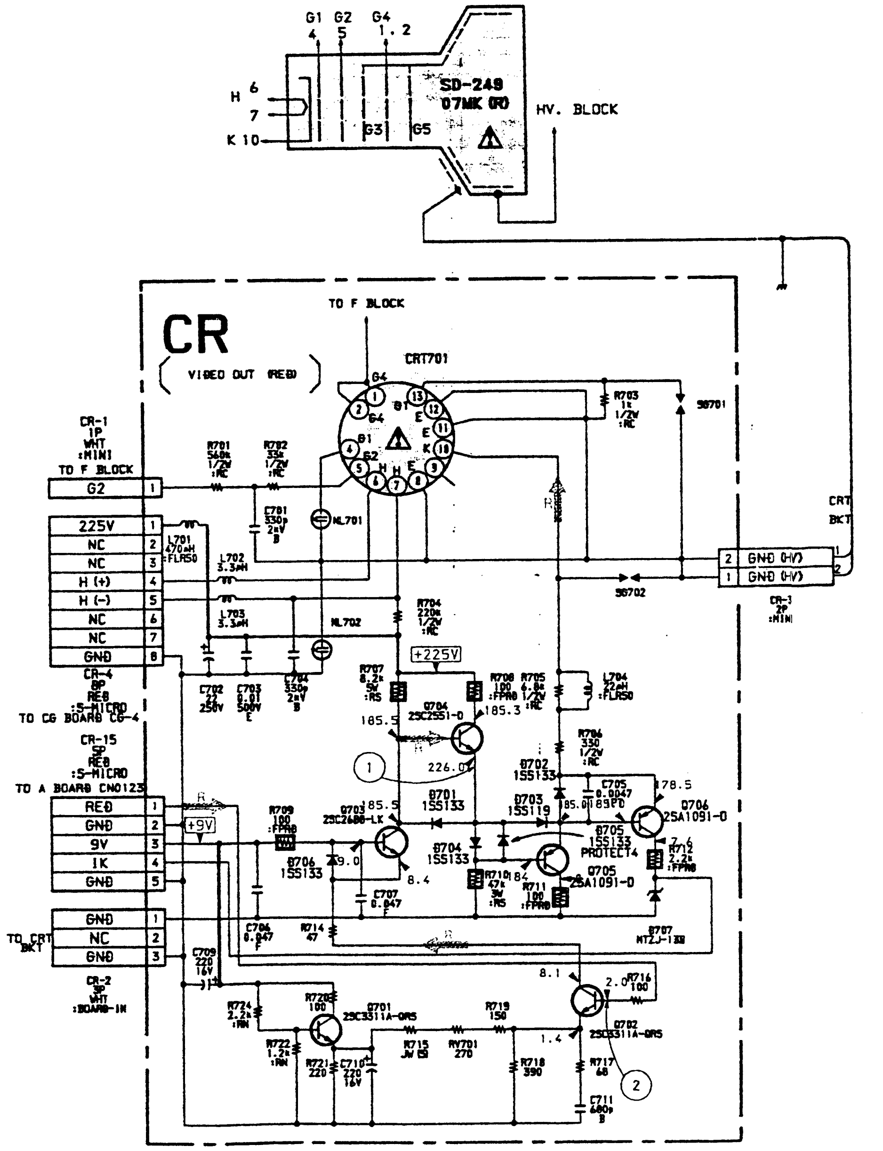


CG BOARD WAVEFORMS

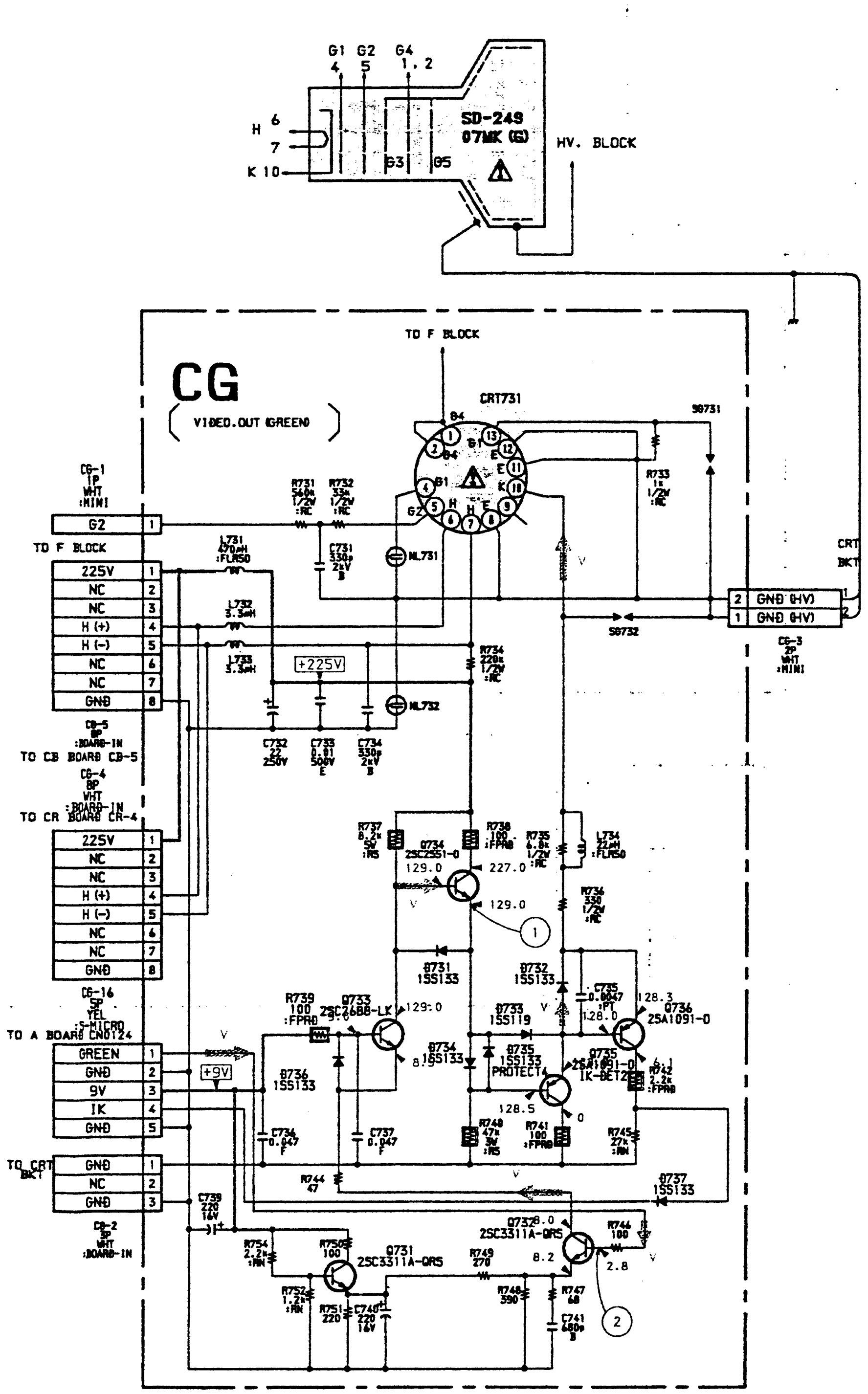


CB BOARD WAVEFORMS

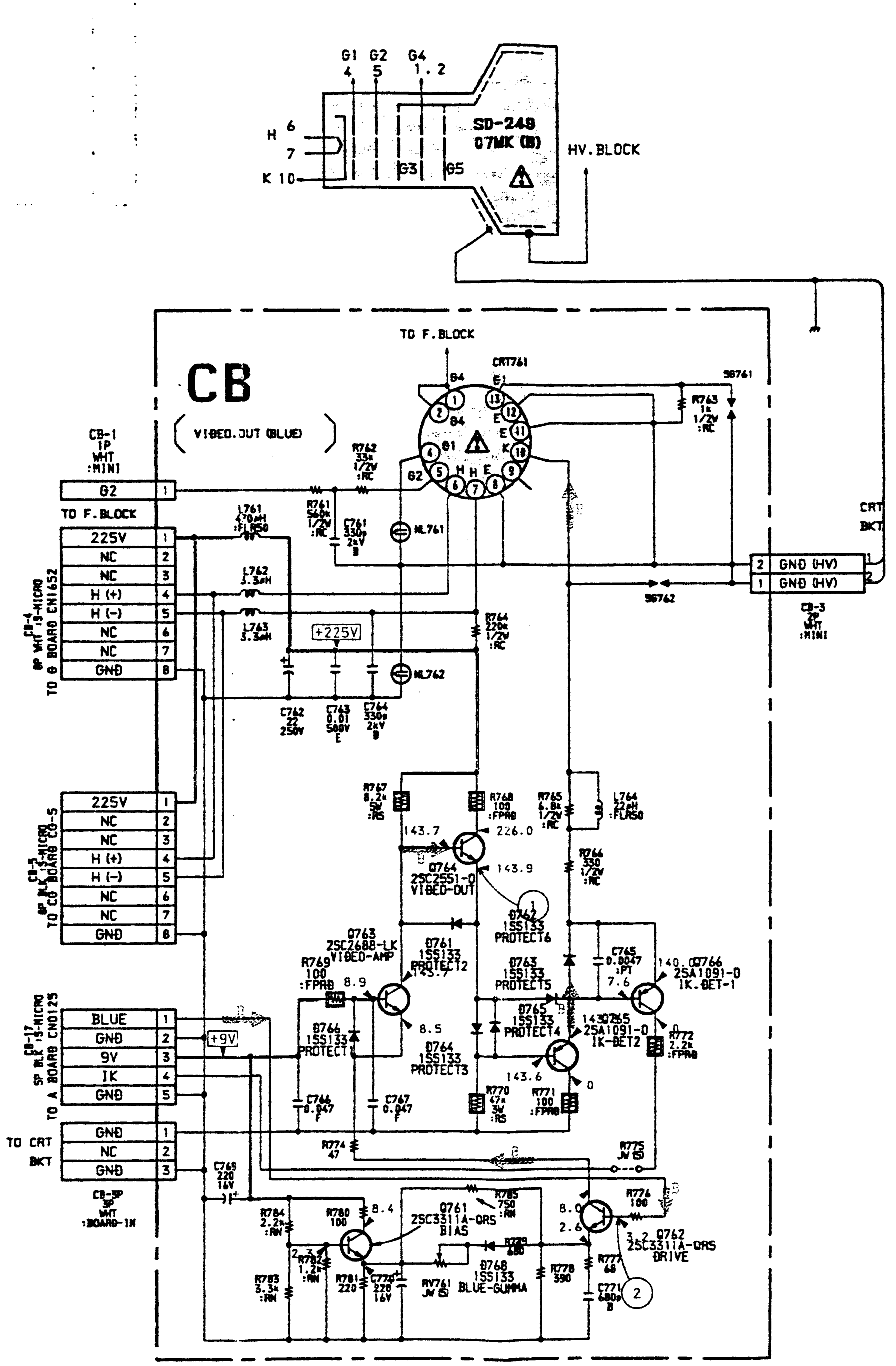



G1 G2 G4
SD-249 07MK 0D
HV. BLOCK
CR
(VIDEO OUT (RED))
TO F BLOCK
CRT701
CR-1 1P WHT :MINI TO F BLOCK
G2
225V NC NC H (+) H (-) NC NC GND
CR-4 8P RED :S-MICRO TO CG BOARD CG-4
CR-15 5P RED :S-MICRO TO A BOARD CN0123
RED GND 9V IK GND
TO CRT BKT
GND NC GND
CR-2 3P WHT :BOARD-IN
Q704 2SC2551-D
Q701 2SC3311A-QRS
Q702 2SC3311A-QRS
Q705 2SA1091-O PROTECT
Q706 2SA1091-O
+225V
+9V

B-S5342<ET.>-CR.

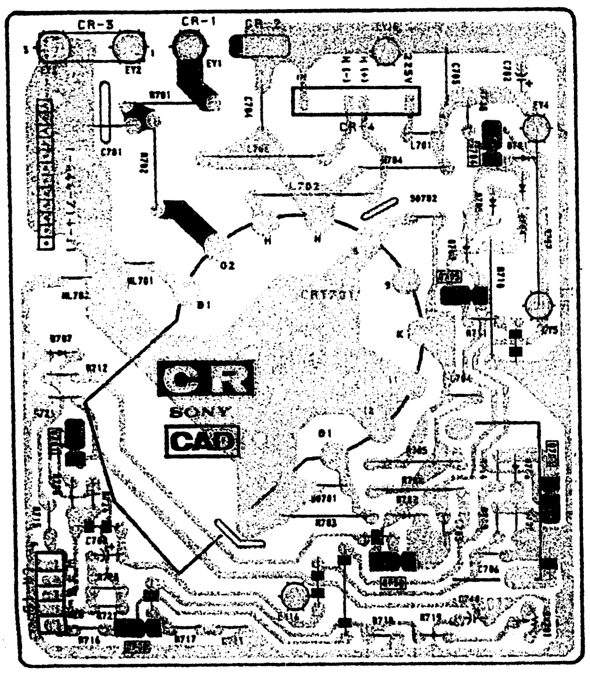

SD-249
07MK (G)
HV. BLOCK
G1 G2 G4
H
K
G3
G5
CG
VIDEO OUT (GREEN)
TO F BLOCK
CRT731
CG-1
1P
WHT
:MINI
G2
225V
NC
H (+)
H (-)
GND
CG-5
8P
TO CB BOARD CB-5
CG-4
8P
WHT
TO CR BOARD CR-4
CG-16
5P
YEL
TO A BOARD CN0124
GREEN
9V
IK
TO CRT BKT
CG-2
3P
WHT
CG-3
2P
WHT
:MINI
GND (HV)
CRT BKT
+225V
+9V
Q734
2SC2551-O
Q733
2SC2688-LK
Q735
2SA1091-O
IK-BET2
Q736
2SA1091-O
Q731
2SC3311A-QRS
Q732
2SC3311A-QRS
D731
1SS133
D732
1SS133
D733
1SS119
D734
1SS133
D735
1SS133
PROTECT4
D736
1SS133
D737
1SS133
NL731
NL732
SG731
SG732
L731
L732
L733
L734
R731
R732
R733
R734
R735
R736
R737
R738
R739
R741
R742
R744
R745
R746
R747
R748
R749
R750
R751
R752
R754
C731
C732
C733
C734
C735
C736
C737
C739
C740
C741
129.0
227.0
128.3
128.0
128.5
8.0
8.2
2.8

B-55342.<ET.>-CG.

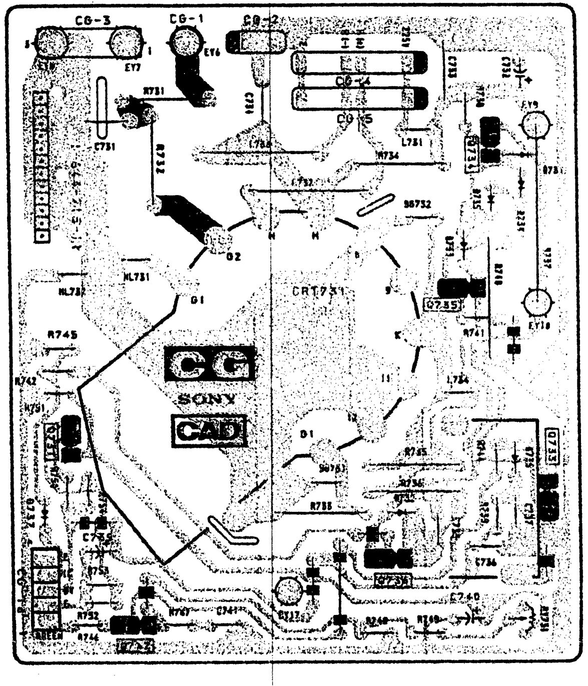

SD-249
07MK (B)
HV.BLOCK
G1 G2 G4
H
K
G3
G5
CB
VIDEO OUT (BLUE)
TO F.BLOCK
CRT761
CB-1
1P
WHT
:MINI
G2
225V
NC
H (+)
H (-)
GND
CB-4
8P WHT
TO B BOARD CN1652
CB-5
8P
TO CG BOARD CG-5
CB-17
5P BLK
TO A BOARD CN0125
BLUE
9V
IK
TO CRT BKT
CB-3P
WHT
CB-3
2P
WHT
:MINI
GND (HV)
CRT BKT
+225V
+9V
Q764
2SC2551-O
VIDEO-OUT
Q763
2SC2688-LK
VIDEO-AMP
Q766
2SA1091-O
IK-BET-1
Q765
2SA1091-O
IK-BET2
Q761
2SC3311A-QRS
BIAS
Q762
2SC3311A-QRS
DRIVE
D761
1SS133
PROTECT2
D762
1SS133
PROTECT6
D763
1SS133
PROTECT5
D764
1SS133
PROTECT3
D765
1SS133
PROTECT4
D766
1SS133
PROTECT
D768
1SS133
BLUE-GUMMA
RV761
NL761
NL762
SG761
SG762
L761
L762
L763
L764
R761
R762
R763
R764
R765
R766
R767
R768
R769
R770
R771
R772
R774
R775
R776
R777
R778
R779
R780
R781
R782
R783
R784
R785
C761
C762
C763
C764
C765
C766
C767
C769
C771
C772
143.7
226.0
143.9
140.0
143.6
8.9
8.5
8.4
8.0
2.6
7.6

B-55342.<ET.>-CB.

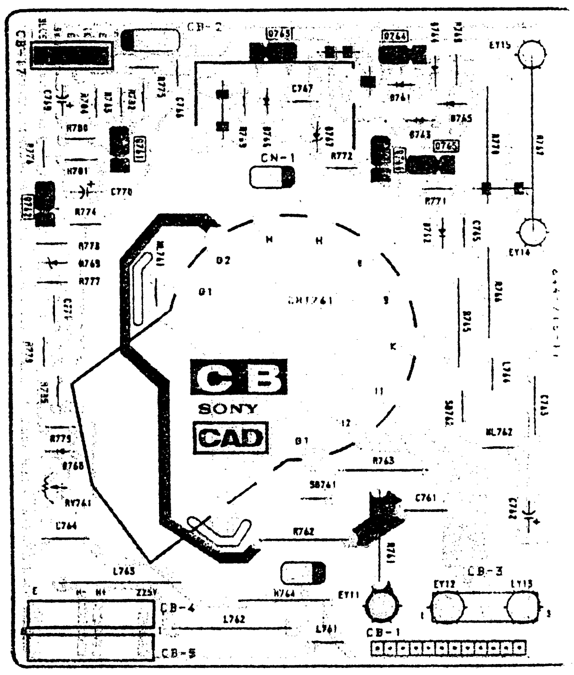
– CR Board –


H
I
J
K
L
M
CR-3
CR-1
CR-2
CRT701
CR
SONY
CAD

– CG Board –

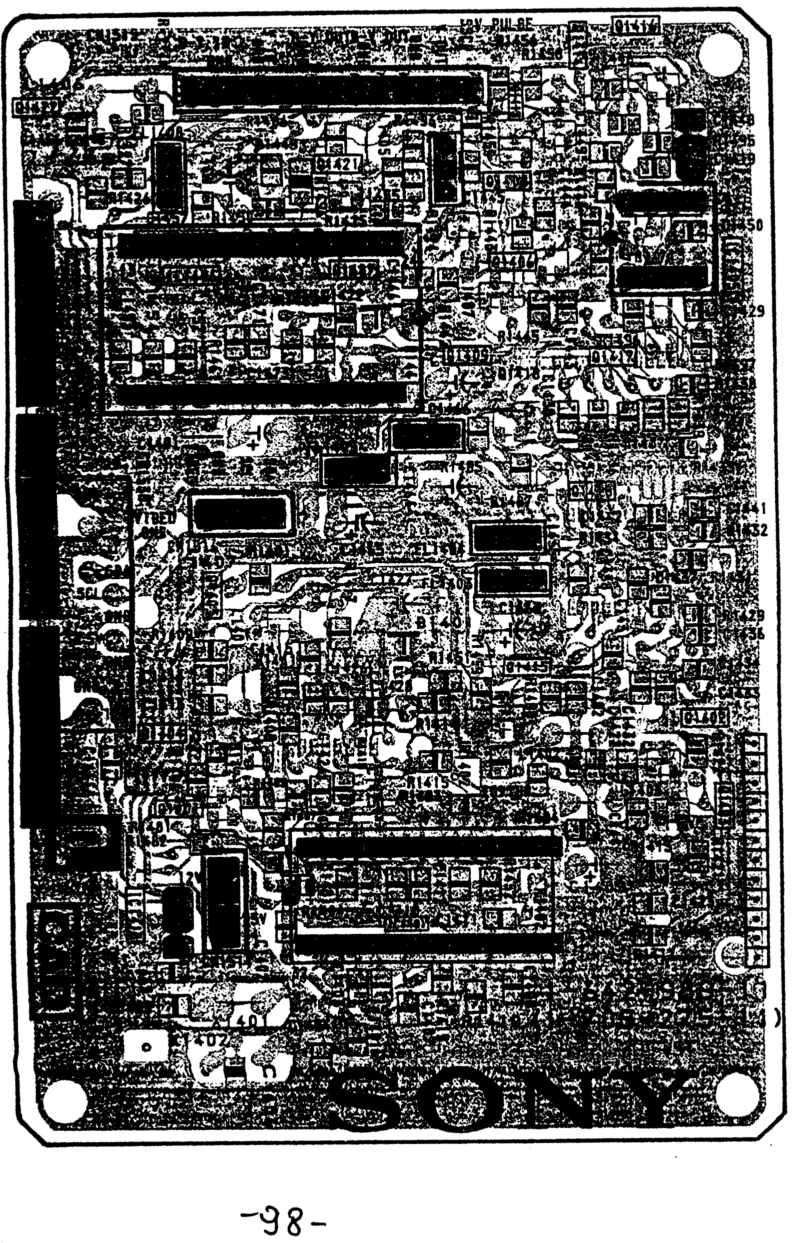

CG-3
CG-1
CG-2
CRT731
CG
SONY
CAD

– CB Board –

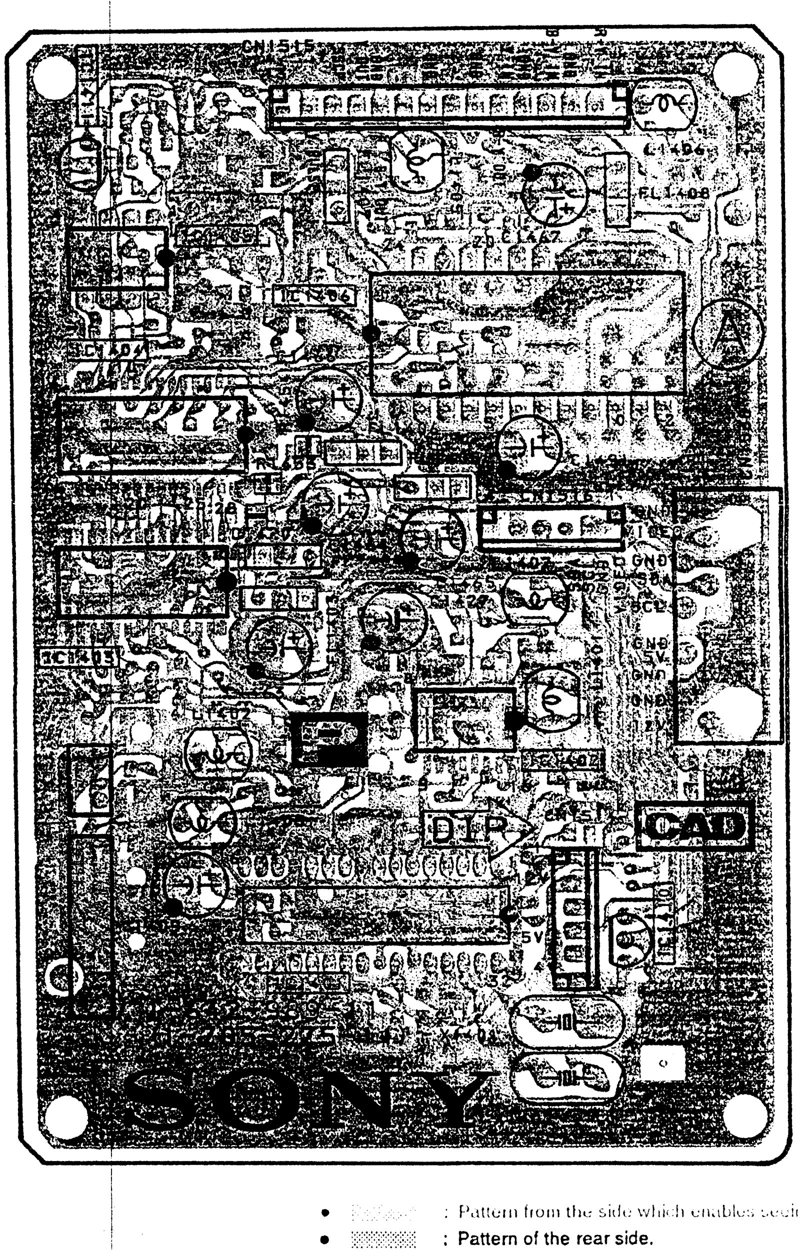

CB-2
CN-1
CRT761
CB
SONY
CAD
CB-3
CB-4
CB-5
CB-1

P [P IN P] **CR** [VIDEO OUT (R)] **CG** [VIDEO OUT (G)] **CB** [VIDEO OUT (B)]

– P Board (Conductor Side) –

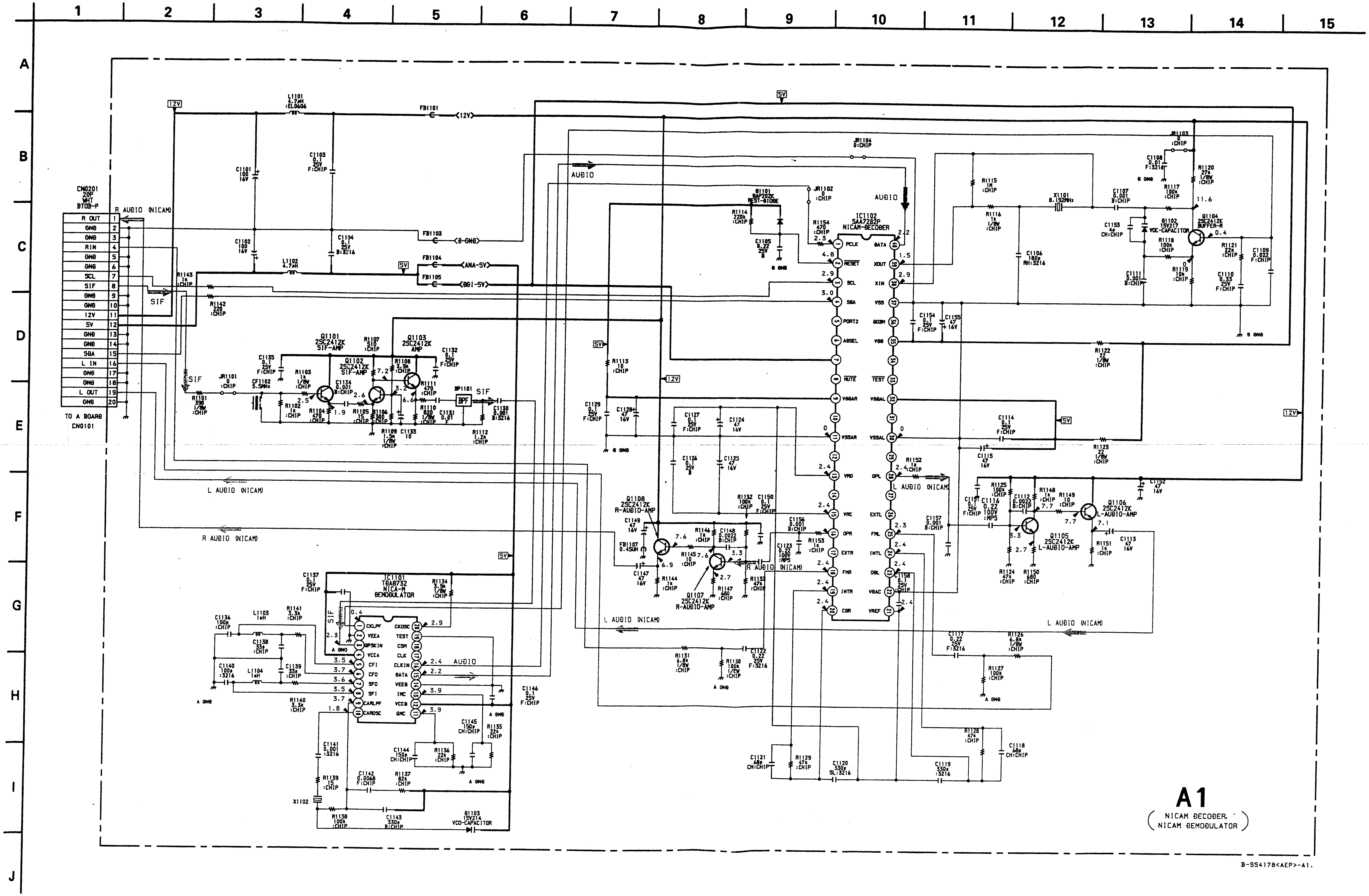

A
B
C
D
E
F
G
SONY

– P Board (Cmopnent Side) –


CN1515
CAD
SONY

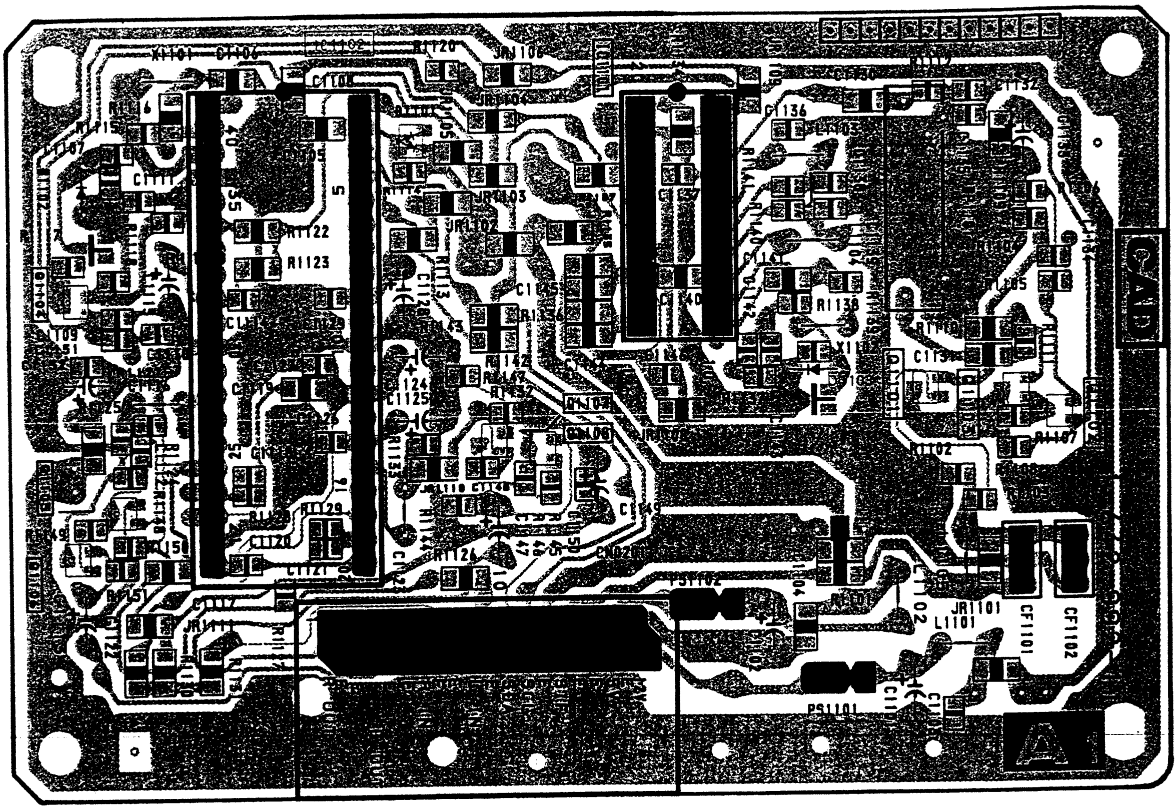
- ▒ : Pattern from the side which enables seeing.
- ░ : Pattern of the rear side.

(11) Schematic Diagram of A1 Board


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
CN0201 20P WHT BTOB-P
R OUT
GND
GND
RIN
GND
GND
SCL
SIF
GND
GND
12V
5V
GND
GND
SDA
L IN
GND
GND
L OUT
GND
TO A BOARD CN0101
R AUDIO (NICAM)
L AUDIO (NICAM)
12V
5V
L1101 4.7μH :EL0606
FB1101
C1101 100 16V
C1103 0.1 25V F:CHIP
C1102 100 16V
C1104 0.1 25V B:3216
L1102 4.7μH
FB1103
(D-GND)
FB1104
(ANA-5V)
FB1105
(DGI-5V)
R1143 1k :CHIP
R1142 220 :CHIP
SIF
Q1101 2SC2412K SIF-AMP
R1107 510 :CHIP
Q1102 2SC2412K SIF-AMP
Q1103 2SC2412K AMP
R1108 3.9k :CHIP
C1132 0.1 25V F:CHIP
C1135 0.1 25V F:CHIP
JR1101 0 :CHIP
CF1102 5.5MHz
R1101 390 1/8W :CHIP
R1103 1k 1/8W :CHIP
R1102 1k :CHIP
C1134 0.001 B:CHIP
R1104 470 :CHIP
R1105 15 :CHIP
R1106 330 :CHIP
R1111 470 :CHIP
R1110 820 1/8W :CHIP
C1131 0.01 F
BP1101 BPF
C1130 0.001 B:3216
R1109 1.5k 1/8W :CHIP
C1133 10
R1112 1.2k :CHIP
AUDIO
JR1104 0:CHIP
D1101 DAP202K RESET-DIODE
R1114 220k :CHIP
JR1102 0 :CHIP
R1154 470 :CHIP
C1105 0.22 25V B
IC1102 SAA7282P NICAM-DECODER
PCLK
RESET
SCL
SDA
PORT2
ADSEL
MUTE
VDDAR
VSSAR
VRD
VRC
OPR
EXTR
FNR
INTR
CDR
DATA
XOUT
XIN
VSS
DDDM
VDD
TEST
VDDAL
VSSAL
OPL
EXTL
FNL
INTL
DDL
VDAC
VREF
R1115 1M :CHIP
R1116 1k 1/8W :CHIP
X1101 8.192MHz
C1106 180p RH:3216
JR1103 0 :CHIP
C1108 0.01 F:3216
R1120 27k 1/8W :CHIP
R1117 100k :CHIP
C1107 0.001 B:CHIP
C1153 4p CH:CHIP
D1102 1SV217 VOC-CAPACITOR
Q1104 2SC2412K BUFFER-R
R1118 100k :CHIP
R1119 10k :CHIP
R1121 22k :CHIP
C1109 0.022 F:CHIP
C1111 0.001 B:CHIP
C1110 0.33 25V F:CHIP
C1154 0.1 25V F:CHIP
C1155 47 16V
R1122 22 1/8W :CHIP
R1113 10 :CHIP
C1129 0.1 25V F:CHIP
C1128 47 16V
C1127 0.1 25V F:CHIP
C1124 47 16V
C1126 0.1 25V B
C1125 47 16V
C1114 0.1 25V F:CHIP
C1115 47 16V
R1123 22 1/8W :CHIP
R1152 1k :CHIP
L AUDIO (NICAM)
R AUDIO (NICAM)
Q1108 2SC2412K R-AUDIO-AMP
C1149 47 16V
FB1107 0.45UH
C1147 47 16V
R1144 1k :CHIP
R1146 1k :CHIP
C1148 0.0022 B:CHIP
R1145 10 :CHIP
Q1107 2SC2412K R-AUDIO-AMP
R1147 680 :CHIP
R1132 100k :CHIP
C1150 0.1 25V F:CHIP
C1156 0.001 B:CHIP
C1123 0.22 100V :MPS
R1153 1k :CHIP
R1133 47k :CHIP
C1157 0.001 B:CHIP
C1158 0.1 25V :CHIP
R1125 100k :CHIP
C1116 0.22 100V :MPS
C1112 0.0022 B:CHIP
R1148 1k :CHIP
R1149 10 :CHIP
Q1106 2SC2412K L-AUDIO-AMP
C1152 47 16V
C1113 47 16V
Q1105 2SC2412K L-AUDIO-AMP
R1151 1k :CHIP
R1124 47k :CHIP
R1150 680 :CHIP
C1137 0.1 25V F:CHIP
IC1101 TDA8732 NICA-M DEMODULATOR
R1134 3.9k 1/8W :CHIP
C1136 100p :CHIP
L1103 1mH
R1141 3.3k :CHIP
C1138 33p :CHIP
C1140 100p :3216
L1104 1mH
C1139 33p :CHIP
R1140 3.3k :CHIP
CKLPF
VEEA
DPSKIN
VCCA
CFI
CFO
SFO
SFI
CARLPF
CAROSC
CKOSC
TEST
CSM
CLK
CLKIN
DATA
VEED
IMC
VCCD
QMC
C1146 0.1 25V F:CHIP
C1145 150p CH:CHIP
R1135 22k :CHIP
C1144 150p CH:CHIP
R1136 22k :CHIP
C1141 0.001 :3216
R1139 15 :CHIP
X1102
C1142 0.0068 F:CHIP
R1137 82k :CHIP
R1138 100k :CHIP
C1143 330p B:CHIP
D1103 1SV214 VCO-CAPACITOR
R1131 6.8k 1/8W :CHIP
R1130 100k 1/2W :CHIP
C1122 0.22 25V F:3216
C1117 0.22 25V F:3216
R1126 6.8k 1/8W :CHIP
R1127 100k :CHIP
R1128 47k :CHIP
C1118 68p CH:CHIP
C1121 68p CH:CHIP
R1129 47k :CHIP
C1120 330p SL:3216
C1119 330p :3216
A GND
D GND
A1
NICAM DECODER NICAM DEMODULATOR
B-SS4178<AEP>-A1.

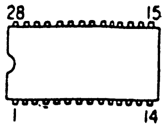
A1 [NICAM DECODER, NICAM DEMODULATOR]

– A1 Board –

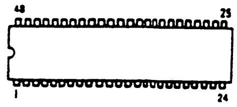

X1101
C1106
IC1102
R1120
JR1106
C1108
R1115
C1111
R1122
R1123
JR1103
JR1102
C1145
R1136
C1136
C1140
R1138
R1142
C1124
C1125
R1129
C1120
C1121
R1126
CN1102
PS1102
C1117
JR1111
C1130
R1107
R1102
JR1101
L1101
CF1101
CF1102
PS1101
CAD
A1

5-4. SEMICONDUCTORS

CXA1268P
M27C512-20B1-AE21
SDA5231-2
SDA9087XGEG
SDA9089XGEG
TDA6612

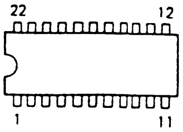


CXA1545AS
CXA1587S



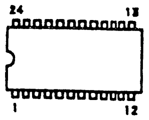
(TOP VIEW)

CXA1656S



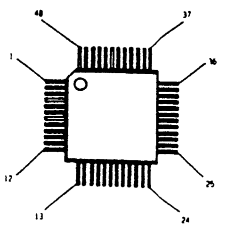
(Top view)

CXD1050A-15P
TDA8443A/C4
TDA9145



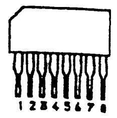
TOP VIEW

CXD2018Q

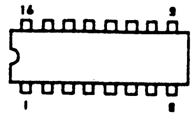

48
37
1
36
12
25
13
24

TOP VIEW

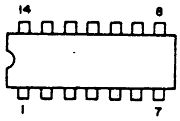
CX-7948A
M5220L
μPC1498H



CXA1315P
IR3M02
MC14053BCP
μPD4053BC

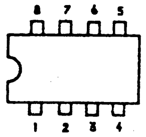


LM324N
MB3614

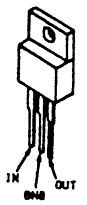


(TOP VIEW)

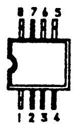
LM393P
SDA9086-3
TDA2822M
TEA2114
TL082CP
μPC393C
μPC4082C
μPC4558C
X24C16S



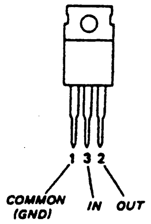
L78M05
MC7809CT
NJM78M05FA
RC78M05FA
NJM7815FA
RC7805FA
RC7809FA
RC7812FA
RC7815FA
μPC7812H



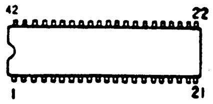
LM358D
LM358DR-E1



NJM79M05FA
NJM7915FA
RC79M05FA

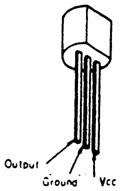

1 3 2
COMMON (GND)
IN
OUT

PA0036

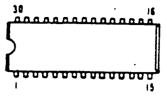


TOP VIEW

RC78L05A
TA78L005AP

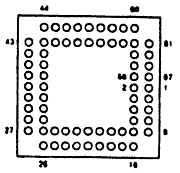

Output
Ground
Vcc

SBX1692-01



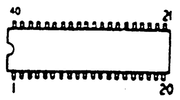
(Top view)

SDA30C162

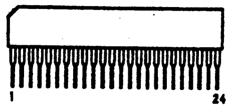

44
60
43
61
66
2
67
1
27
9
26
10

TOP VIEW

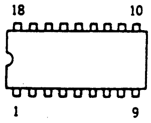
SAA7282P
SDA5248C1



STK-4278L

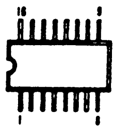


TDA2595/V9



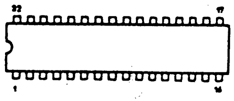
TOP VIEW

TDA4660T
TDA4660V2



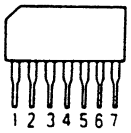
TOP VIEW

TDA9160

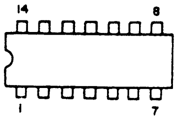


TOP VIEW

μPC1037HA

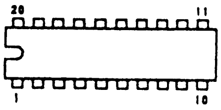


μPC1394C



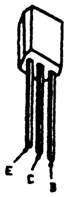
(TOP VIEW)

TDA8732
μPD424256C-80

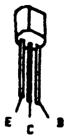


(TOP VIEW)

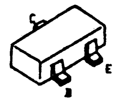
DTC144ES



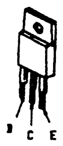
2SA1013-O
2SA1091-O
2SA1208-S
2SC2551-O
2SD788-5



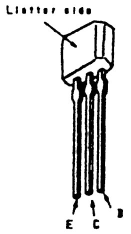
DTA124EK
DTA144EK
DTC114EK
DTC124EK
DTC144EK
2SA1037K
2SA1162-G
2SC2412K
2SC1623-L5L6
2SC2413K-Q



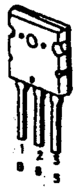
2SA1010-M
2SA1261-K
2SB861-C
2SB1015
2SB1094-LK
2SC3675
2SD1138-C
2SD1406-YGR



2SA1309A-Q
2SA1175-HFE
2SC2785-HFE
2SC3311A-QRS


Lietter side
E
C
B

2SA1301-O



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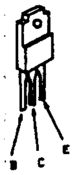
2SC3298A-Y
2SC3298B-Y



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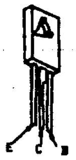
2SC2688-LK
2SC2688-LK
2SC3271-N
2SC3271-P



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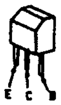
2SC3733



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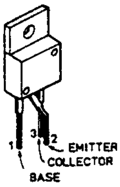
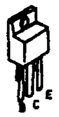
2SC4632-CB7


1
3
2
EMITTER
COLLECTOR
BASE

2SD2012



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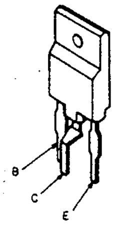
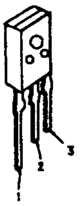
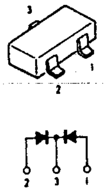


D10SC6MR



DAN202K
MA152WK



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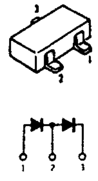
1SS226



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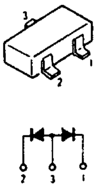
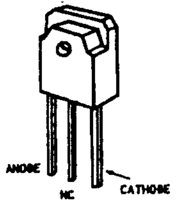
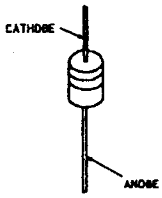
1S2836



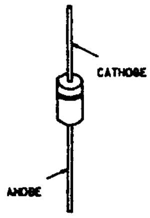
DD50R


ANODE
NC
CATHODE

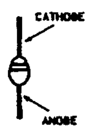
EGP10G
MTZJ-13B
MTZJ-13C
MTZJ-3.9A
MTZJ-3.9B
MTZJ-33C
MTZJ-39B
MTZJ-5.1A
MTZJ-5.1B
MTZJ-5.6B
MTZJ-9.1
MTZJ-7.5A
MTZJ-11B
MTZJ-18B
MTZJ-24C
RD18ES-B2
RD2.0ES-B1
RD27F-B2
RD5.1ES-B2
RD5.6ES-B2
RD7.5ES-B2
1SS119
1SS133


CATHODE
ANODE

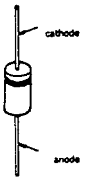
ERC06-15S
ERB81-004
ERC81-004
RU-1C
RU-2AM
RU-3AM
S3V10SB


CATHODE
ANODE

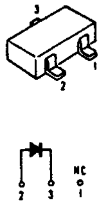
ERC38-08
GP08D
U05G
V06C
V09G
V19E
V30N


CATHODE
ANODE

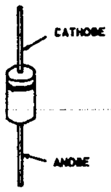
ERD28-08S


cathode
anode

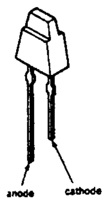
MA3056
MA3056M
RD5.6M-B2



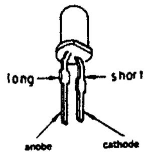
SB140


CATHODE
ANODE

MTZJ-6.2A
SLP361B


anode
cathode

TLR124


long
short
anode
cathode

SECTION 6

EXPLODED VIEWS

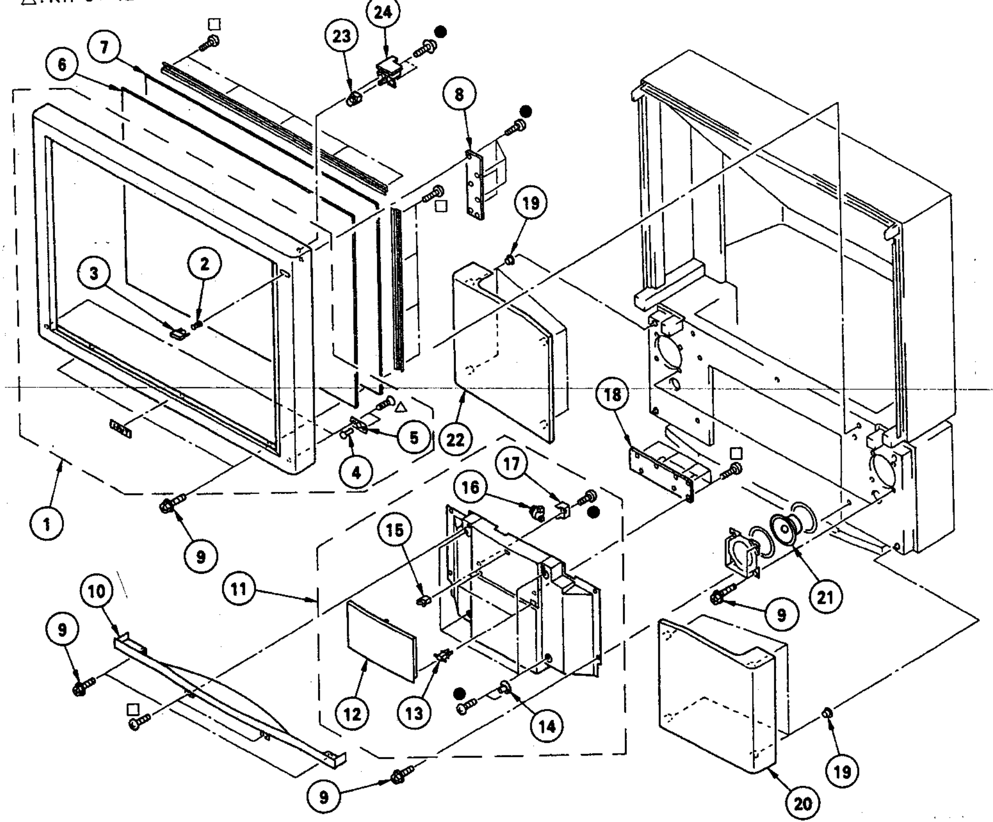
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CONTROL PANEL

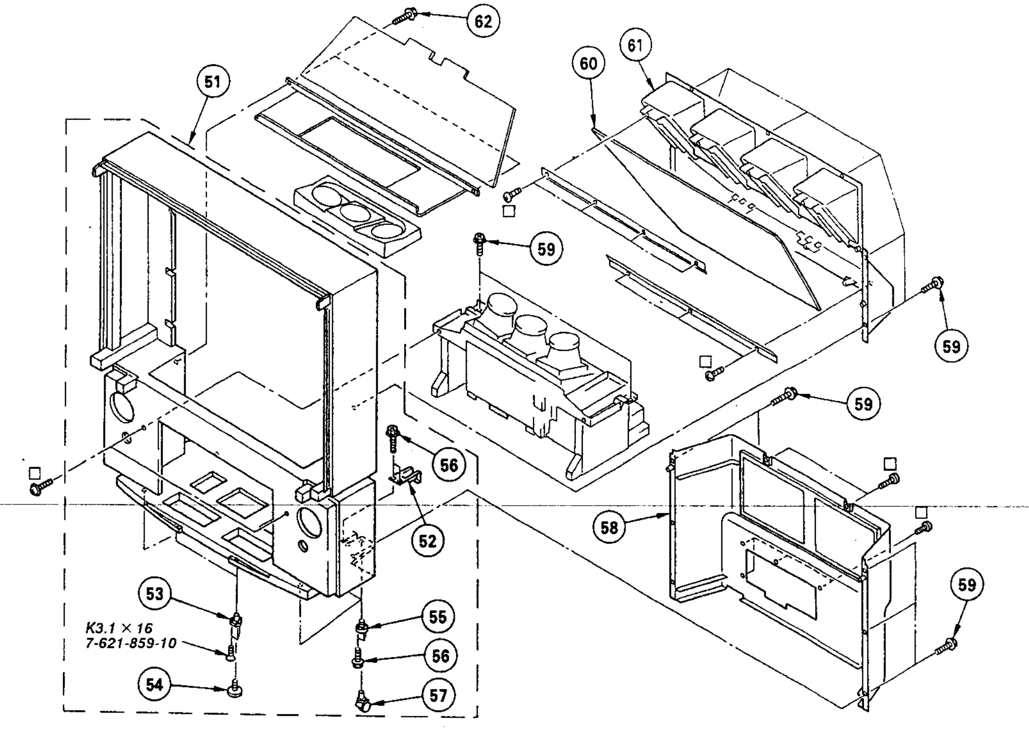
●: BVTP 3 × 12 7-685-648-79
□: BVTP 4 × 12 7-685-661-79
△: KTP 3 × 12 7-685-248-14



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-609-1	FRAME ASSY, SCREEN	2~5	13	3-703-035-11	SHAFT, LID	
2	3-308-717-00	SPRING, COMPRESSION		14	4-843-806-00	STRIKE	
3	4-037-635-01	BUTTON, POWER		15	4-392-036-01	CATCHER, PUSH	
4	4-838-452-00	STRIKE		16	3-721-204-21	DAMPER	
5	4-838-453-00	SUPPORT		17	4-397-047-01	HOLDER, DAMPER	
6	4-037-360-11	PLATE (L), DIFFUSION		18	*1-644-711-11	H2 BOARD	
7	4-037-359-11	PLATE (F), DIFFUSION		19	4-838-438-00	LATCH	
8	*1-644-710-11	H1 BOARD		20	X-4030-569-1	GRILLE (R) ASSY, SPEAKER	
9	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		21	1-504-145-11	SPEAKER (12CM)	
10	4-037-629-01	ESCUTCHEON, FRONT, FINAL		22	X-4030-570-1	GRILLE (L) ASSY, SPEAKER	
11	X-4030-605-1	PANEL ASSY, CONTROL	12-17	23	4-037-636-01	ADAPTOR, BUTTON	
12	4-037-632-01	LID, FINAL CONTROL		24	*1-644-712-11	H3 BOARD	

6-2. CABINET

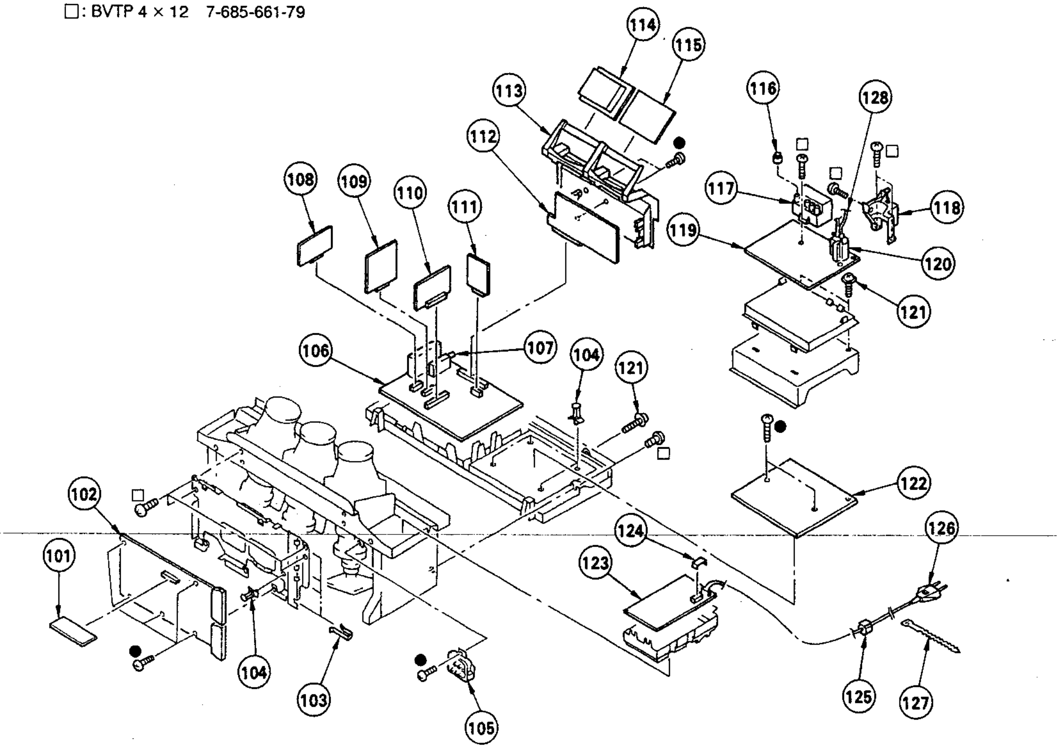
□: BVTP 4 × 12 7-685-661-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4030-603-1	CABINET ASSY	52~57	57	4-032-343-11	CASTER	
52	4-037-639-01	BRACKET, AC CORD		58	X-4030-604-1	COVER ASSY, BACK	
53	4-037-473-01	NUT, FITTING		59	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
54	4-037-472-01	LEG, ADJUSTABLE		60	4-037-534-01	MIRROR (46), REFLECTION	
55	4-030-850-01	SOCKET, CASTER		61	4-036-462-01	COVER (46"), MIRROR	
56	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD		62	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD	

6-3. CHASSIS

●: BVTP 3 × 12 7-685-648-79
□: BVTP 4 × 12 7-685-661-79

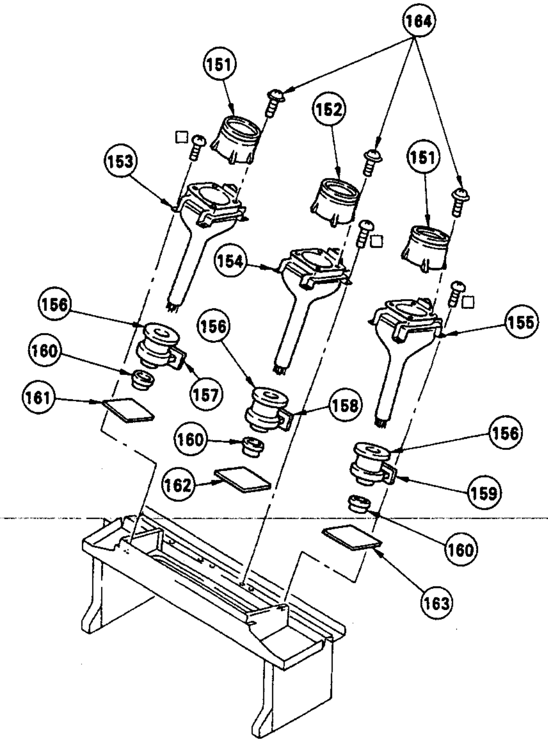


The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*1-644-278-12	DS BOARD	
102	*A-1341-579-A	D BOARD, COMPLETE	
103	*4-393-401-01	SPRING	
104	*3-670-570-21	SPACER, SUPPORT	
105	⚠ 1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)	
106	*A-1296-987-A	A BOARD, COMPLETE	
107	⚠ 1-693-185-11	TUNER (UV916H)	
108	*A-1630-111-A	A1 BOARD, COMPLETE	
109	*A-1342-193-A	VM BOARD, COMPLETE	
110	*A-1635-001-A	K BOARD, COMPLETE	
111	*A-1131-046-A	B1 BOARD, COMPLETE	
112	*A-1388-158-A	J BOARD, COMPLETE	
113	*4-037-620-01	BRACKET, J	
114	*A-1645-024-A	V BOARD, COMPLETE	
115	*A-1622-005-A	P BOARD, COMPLETE	
116	4-373-137-01	CAP (Z), RUBBER	
117	⚠ 1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
118	4-034-482-01	COVER, FBT	
119	*A-1390-305-A	N BOARD, COMPLETE	
120	⚠ 1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)	
121	3-701-810-91	SCREW, TERMINAL	
122	*A-1316-137-A	G BOARD, COMPLETE	
123	*A-1241-083-A	F BOARD, COMPLETE	
124	4-201-057-01	COVER, FUSE	
125	⚠ 4-389-201-11	HOLDER, AC CORD	
126	⚠ 1-590-501-11	CORD, POWER (WITH NOISE FILTER)	
127	3-701-007-00	BAND, BINDING	
128	1-574-590-31	LEAD ASSY, HIGH-VOLTAGE	

6-4. PICTURE TUBE

□: BVTP 4 × 12 7-685-661-79



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
151	4-034-057-01	LENS (LINNIT)	
152	4-034-057-11	LENS (LINNIT)	
153	⚠ 8-736-633-05	PICTURE TUBE (SD-249 (R))	
154	⚠ 8-736-631-05	PICTURE TUBE (SD-249 (G))	
155	⚠ 8-736-632-05	PICTURE TUBE (SD-249 (B))	
156	⚠ 1-451-396-21	DEFLECTION YOKE (Y936PA)	
157	*1-644-717-11	ZR BOARD	
158	*1-644-718-11	ZG BOARD	
159	*1-644-719-11	ZB BOARD	
160	⚠ 1-452-443-13	NECK ASSY, PICTURE TUBE(NA367)	
161	*A-1331-228-A	CR BOARD, COMPLETE	
162	*A-1331-229-A	CG BOARD, COMPLETE	
163	*A-1331-230-A	CB BOARD, COMPLETE	
164	3-701-810-91	SCREW, TERMINAL	

SECTION 7

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

RESISTORS
- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1131-046-A	B1 BOARD, COMPLETE ******************				
		<CAPACITOR>				
C1301	1-124-478-11	ELECT	100MF	20%	25V	
C1302	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1303	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1304	1-124-478-11	ELECT	100MF	20%	25V	
C1305	1-124-478-11	ELECT	100MF	20%	25V	
C1306	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1307	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1308	1-124-478-11	ELECT	100MF	20%	25V	
C1309	1-124-910-11	ELECT	47MF	20%	50V	
C1310	1-124-917-11	ELECT	33MF	20%	50V	
C1311	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C1312	1-124-907-11	ELECT	10MF	20%	50V	
C1314	1-124-907-11	ELECT	10MF	20%	50V	
C1318	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1319	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1320	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1321	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C1322	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C1323	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C1324	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C1325	1-163-169-00	CERAMIC CHIP	33PF	5%	50V	
C1327	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1333	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
		<CONNECTOR>				
CN0302*	1-573-299-11	CONNECTOR, BOARD TO BOARD 10P				
		<DIODE>				
D1302	8-719-400-18	DIODE MA152WK				
		<FILTER>				
FL1301	1-236-620-11	FILTER, LOW PASS				
FL1302	1-236-620-11	FILTER, LOW PASS				
FL1303	1-236-620-11	FILTER, LOW PASS				
FL1304	1-236-164-11	ENCAPSULATED COMPONENT				
		<IC>				
IC1301	8-741-692-01	IC SBX1692-01				
		<COIL>				
L1301	1-408-405-00	INDUCTOR	4.7UH			
L1302	1-408-405-00	INDUCTOR	4.7UH			
L1304	1-408-406-00	INDUCTOR	5.6UH			
L1305	1-408-418-00	INDUCTOR	56UH			
		<TRANSISTOR>				
Q1301	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1302	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1305	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1306	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1307	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1308	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1309	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1310	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1311	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1316	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
		<RESISTOR>				
JR1	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR2	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR3	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR4	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR5	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR6	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR7	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1301	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1302	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1303	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1304	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1305	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1306	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1307	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1308	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1310	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1311	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1312	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1313	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1314	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W	
R1315	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1316	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1319	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1320	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1321	1-216-204-00	METAL GLAZE	1.8K	5%	1/8W	
R1322	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1324	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1326	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R1327	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1328	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1329	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1330	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1331	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1332	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1333	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1334	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1341	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1342	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1343	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1344	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1241-083-A	F BOARD, COMPLETE *****************				
	*4-341-751-01	EYELET (EY1812~EY1827)				
	*4-341-752-01	EYELET (EY1801~EY1811,EY1828~EY1831)				
		<CAPACITOR>				
C1802⚠	1-161-953-81	CERAMIC	0.0047MF	20%	400V	
C1803⚠	1-161-953-81	CERAMIC	0.0047MF	20%	400V	
C1804⚠	1-125-483-11	ELECT(BLOCK)	470MF	20%	400V	
C1805	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C1807⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V	
C1816⚠	1-136-519-11	FILM	0.47MF	20%	300V	
C1817⚠	1-136-519-11	FILM	0.47MF	20%	300V	
C1820⚠	1-161-953-81	CERAMIC	0.0047MF	20%	400V	
C1821	1-161-953-81	CERAMIC	0.0047MF	20%	400V	
		<CONNECTOR>				
CN1829*	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CN1850*	1-568-878-51	PIN, CONNECTOR 3P				
CN1851*	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CN1857*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
CN1858*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
CN1859*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
CN1860*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
		<DIODE>				
D1801⚠	8-719-503-06	DIODE S3WB60Z				
D1803	8-719-911-19	DIODE 1SS119				
		<FUSE>				
F1801⚠	1-576-232-21	FUSE (H.B.C.) 5A/250V				
	1-533-230-11	HOLDER, FUSE; F1801				
		<TRANSFORMER>				
LF1801⚠	1-424-436-11	TRANSFORMER, LINE FILTER				
LF1802⚠	1-424-436-11	TRANSFORMER, LINE FILTER				
		<RESISTOR>				
R1801⚠	1-260-132-91	CARBON	560K	5%	1/2W	
R1803	1-249-377-11	CARBON	0.47	5%	1/4W	F
R1804⚠	1-205-790-11	WIREWOUND	5.6	5%	20W	
R1808⚠	1-244-945-91	CARBON	1M	5%	1/2W	
R1809	1-218-265-11	METAL GLAZE	8.2M	5%	1W	
		<RELAY>				
RY1801⚠	1-515-805-11	RELAY, POWER				

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1296-987-A	A BOARD, COMPLETE *****************				
	4-200-001-01	HOLDER, IC				
	4-201-023-01	SPACER, INSULATING				
	*4-341-751-01	EYELET (EY46~EY59)				
	*4-341-752-01	EYELET (EY30~EY40)				
	*4-363-146-71	HEAT SINK, V.OUT				
	4-363-414-00	SPACER, MICA				
	*4-368-683-11	SPRING, TRANSISTOR				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
	4-812-134-00	RIVET NYLON, 3.5				
		<CAPACITOR>				
C071	1-124-120-11	ELECT	220MF	20%	16V	
C072	1-124-120-11	ELECT	220MF	20%	16V	
C073	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C074	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C102	1-126-103-11	ELECT	470MF	20%	16V	
C103	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C104	1-124-910-11	ELECT	47MF	20%	50V	
C105	1-126-233-11	ELECT	22MF	20%	50V	
C106	1-124-927-11	ELECT	4.7MF	20%	50V	
C110	1-124-122-11	ELECT	100MF	20%	25V	
C111	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C120	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C201	1-137-373-91	FILM	0.033MF	5%	50V	
C202	1-137-373-91	FILM	0.033MF	5%	50V	
C203	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C204	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C205	1-124-907-11	ELECT	10MF	20%	50V	
C206	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C207	1-137-613-11	FILM	0.0018MF	2%	100V	
C208	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C209	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C210	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C211	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C213	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V	
C214	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V	
C215	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C216	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C217	1-124-925-11	ELECT	2.2MF	20%	50V	
C218	1-124-925-11	ELECT	2.2MF	20%	50V	
C219	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V	
C220	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V	
C221	1-124-925-11	ELECT	2.2MF	20%	50V	
C222	1-124-925-11	ELECT	2.2MF	20%	50V	
C223	1-137-198-81	FILM	1MF	5%	50V	
C224	1-137-198-81	FILM	1MF	5%	50V	
C225	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V	
C226	1-163-007-11	CERAMIC CHIP	680PF	10%	50V	
C227	1-124-907-11	ELECT	10MF	20%	50V	
C228	1-124-907-11	ELECT	10MF	20%	50V	
C229	1-126-101-11	ELECT	100MF	20%	16V	
C230	1-126-101-11	ELECT	100MF	20%	16V	
C231	1-164-346-11	CERAMIC CHIP	1MF		16V	
C232	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C233	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C234	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C235	1-137-134-91	FILM	0.22MF	5%	63V	
C236	1-124-618-11	ELECT	2200MF	20%	35V	
C237	1-124-618-11	ELECT	2200MF	20%	35V	
C238	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C239	1-137-134-91	FILM	0.22MF	5%	63V
C240	1-126-233-11	ELECT	22MF	20%	50V
C241	1-126-233-11	ELECT	22MF	20%	50V
C242	1-124-903-11	ELECT	1MF	20%	50V
C243	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C244	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C251	1-126-320-11	ELECT	10MF	20%	16V
C301	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C302	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C303	1-164-346-11	CERAMIC CHIP	1MF		16V
C304	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C305	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C306	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C307	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C308	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C309	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C310	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C311	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C312	1-124-910-11	ELECT	47MF	20%	50V
C313	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C314	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C315	1-124-910-11	ELECT	47MF	20%	50V
C316	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C317	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C318	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C319	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C320	1-124-910-11	ELECT	47MF	20%	50V
C321	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C322	1-126-233-11	ELECT	22MF	20%	50V
C323	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C324	1-124-910-11	ELECT	47MF	20%	50V
C341	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C342	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C343	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C344	1-162-638-11	CERAMIC CHIP	1MF		16V
C345	1-162-638-11	CERAMIC CHIP	1MF		16V
C347	1-162-638-11	CERAMIC CHIP	1MF		16V
C348	1-162-638-11	CERAMIC CHIP	1MF		16V
C349	1-162-638-11	CERAMIC CHIP	1MF		16V
C350	1-124-907-11	ELECT	10MF	20%	50V
C351	1-124-234-00	ELECT	22MF	20%	16V
C353	1-162-638-11	CERAMIC CHIP	1MF		16V
C354	1-162-638-11	CERAMIC CHIP	1MF		16V
C355	1-162-638-11	CERAMIC CHIP	1MF		16V
C356	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C357	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C358	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C359	1-124-907-11	ELECT	10MF	20%	50V
C361	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C362	1-137-134-91	FILM	0.22MF	5%	63V
C363	1-124-907-11	ELECT	10MF	20%	50V
C365	1-124-120-11	ELECT	220MF	20%	16V
C366	1-124-903-11	ELECT	1MF	20%	50V
C401	1-164-005-11	CERAMIC CHIP	0.47MF		16V
C402	1-124-917-11	ELECT	33MF	20%	50V
C403	1-164-005-11	CERAMIC CHIP	0.47MF		16V
C411	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C412	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C421	1-124-910-11	ELECT	47MF	20%	50V
C422	1-124-910-11	ELECT	47MF	20%	50V
C423	1-137-047-11	FILM	0.01MF	10%	400V
C424	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C425	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C426	1-124-910-11	ELECT	47MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C427	1-164-346-11	CERAMIC CHIP	1MF		16V
C428	1-164-346-11	CERAMIC CHIP	1MF		16V
C429	1-124-119-00	ELECT	330MF	20%	16V
C501	1-126-103-11	ELECT	470MF	20%	16V
C502	1-124-902-00	ELECT	0.47MF	20%	50V
C503	1-130-487-00	MYLAR	0.022MF	5%	50V
C504	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C505 ⚠	1-136-598-11	FILM	3MF	5%	200V
C507	1-108-700-11	MYLAR	0.047MF	10%	200V
C508	1-102-973-00	CERAMIC	100PF	5%	50V
C509	1-102-030-00	CERAMIC	330PF	10%	500V
C510 ⚠	1-136-565-11	FILM	0.015MF	3%	1.4KV
C514	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C515	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C517	1-124-907-11	ELECT	10MF	20%	50V
C518	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C520	1-126-233-11	ELECT	22MF	20%	50V
C522	1-123-024-21	ELECT	33MF		160V
C523	1-108-700-11	MYLAR	0.047MF	10%	200V
C524	1-124-477-11	ELECT	47MF	20%	16V
C525	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C526	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C528	1-124-662-11	ELECT	220MF	20%	50V
C529	1-124-907-11	ELECT	10MF	20%	50V
C530	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C531	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C532	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C536	1-124-662-11	ELECT	220MF	20%	50V
C537	1-124-662-11	ELECT	220MF	20%	50V
C539	1-124-907-11	ELECT	10MF	20%	50V
C542	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C543	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C544	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C545	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C557	1-102-030-00	CERAMIC	330PF	10%	500V
C569	1-123-935-00	ELECT	33MF	20%	160V
C574	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C577	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C578	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C579	1-124-910-11	ELECT	47MF	20%	50V
C580	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C581	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C582	1-126-233-11	ELECT	22MF	20%	50V
C583	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C586	1-163-063-00	CERAMIC CHIP	0.022MF	10%	50V
C587	1-124-903-11	ELECT	1MF	20%	50V
C588	1-164-346-11	CERAMIC CHIP	1MF		16V
C589	1-126-233-11	ELECT	22MF	20%	50V
C590	1-126-233-11	ELECT	22MF	20%	50V
C591	1-124-925-11	ELECT	2.2MF	20%	50V
C592	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C593	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C595	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C596	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C680	1-124-122-11	ELECT	100MF	20%	25V
C681	1-126-101-11	ELECT	100MF	20%	16V
C682	1-126-101-11	ELECT	100MF	20%	16V
C684	1-124-478-11	ELECT	100MF	20%	25V
C685	1-124-122-11	ELECT	100MF	20%	50V
C686	1-126-233-11	ELECT	22MF	20%	50V
C687	1-126-233-11	ELECT	22MF	20%	50V

<FILTER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CF581	1-577-611-11	OSCILALTOR, CERAMIC	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN0001*	1-568-880-71	PIN, CONNECTOR 5P	
CN0101	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0102	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
CN0103	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0105*	1-568-879-51	PIN, CONNECTOR 4P	
CN0106*	1-568-880-51	PIN, CONNECTOR 5P	
CN0108*	1-564-513-11	PLUG, CONNECTOR 10P	
CN0109	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN0110*	1-568-882-51	PIN, CONNECTOR 7P	
CN0113	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN0114*	1-568-879-51	PIN, CONNECTOR 4P	
CN0115*	1-564-516-11	PLUG, CONNECTOR 13P	
CN0116*	1-568-879-51	PIN, CONNECTOR 4P	
CN0119*	1-568-878-51	PIN, CONNECTOR 3P	
CN0120*	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0121*	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0122*	1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0123*	1-568-880-71	PIN, CONNECTOR 5P	
CN0124*	1-568-880-81	PIN, CONNECTOR 5P	
CN0125*	1-568-880-61	PIN, CONNECTOR 5P	
CN0126*	1-564-511-51	PLUG, CONNECTOR 8P	
CN0127*	1-564-512-11	PLUG, CONNECTOR 9P	
CN0128*	1-568-881-51	PIN, CONNECTOR 6P	
CN0129*	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN0131*	1-568-879-51	PIN, CONNECTOR 4P	
CN0132*	1-564-511-61	PLUG, CONNECTOR 8P	
CN0133*	1-564-513-11	PLUG, CONNECTOR 10P	
CN0134*	1-568-880-51	PIN, CONNECTOR 5P	
CN0135*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0137*	1-564-511-51	PLUG, CONNECTOR 8P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D068	8-719-104-34	DIODE 1S2836	
D069	8-719-104-34	DIODE 1S2836	
D071	8-719-109-89	DIODE RD5.6ES-B2	
D073	8-719-109-89	DIODE RD5.6ES-B2	
D075	8-719-400-18	DIODE MA152WK	
D077	8-719-400-18	DIODE MA152WK	
D078	8-719-109-89	DIODE RD5.6ES-B2	
D079	8-719-109-89	DIODE RD5.6ES-B2	
D101	8-719-982-27	DIODE MTZJ-33C	
D205	8-719-400-18	DIODE MA152WK	
D206	8-719-400-18	DIODE MA152WK	
D207	8-719-921-89	DIODE MTZJ-13C	
D208	8-719-400-18	DIODE MA152WK	
D209	8-719-911-19	DIODE 1SS119	
D210	8-719-911-19	DIODE 1SS119	
D211	8-719-911-19	DIODE 1SS119	
D212	8-719-911-19	DIODE 1SS119	
D213	8-719-400-18	DIODE MA152WK	
D301	8-719-400-18	DIODE MA152WK	
D304	8-719-109-89	DIODE RD5.6ES-B2	
D305	8-719-400-18	DIODE MA152WK	
D306	8-719-400-18	DIODE MA152WK	
D307	8-719-400-18	DIODE MA152WK	
D308	8-719-800-76	DIODE 1SS226	
D311	8-719-800-76	DIODE 1SS226	
D381	8-719-110-03	DIODE RD7.5ES-B2	

REF.NO.	PART NO.	DESCRIPTION		REMARK
D401	8-719-921-69	DIODE MTZJ-9.1		
D403	8-719-921-69	DIODE MTZJ-9.1		
D405	8-719-921-69	DIODE MTZJ-9.1		
D406	8-719-921-69	DIODE MTZJ-9.1		
D407	8-719-921-69	DIODE MTZJ-9.1		
D501	8-719-971-20	DIODE ERC38-06		
D502	8-719-971-20	DIODE ERC38-06		
D503	8-719-300-80	DIODE RU-1C		
D504	8-719-109-89	DIODE RD5.6ES-B2		
D505	8-719-900-95	DIODE V09G		
D506	8-719-900-95	DIODE V09G		
D507	8-719-970-89	DIODE DD50R		
D508	8-719-400-18	DIODE MA152WK		
D509	8-719-982-08	DIODE MTZJ-3.9B		
D510	8-719-400-18	DIODE MA152WK		
D511	8-719-109-89	DIODE RD5.6ES-B2		
D512	8-719-911-19	DIODE 1SS119		
D513	8-719-400-18	DIODE MA152WK		
D514	8-719-400-18	DIODE MA152WK		
D518	8-719-400-18	DIODE MA152WK		
D521	8-719-400-18	DIODE MA152WK		
D522	8-719-400-18	DIODE MA152WK		
D523	8-719-400-18	DIODE MA152WK		
D524	8-719-400-18	DIODE MA152WK		
D525	8-719-400-18	DIODE MA152WK		
D526	8-719-400-18	DIODE MA152WK		
D527	8-719-400-18	DIODE MA152WK		
D555	8-719-400-18	DIODE MA152WK		
D571	8-719-800-76	DIODE 1SS226		
D611	8-719-400-18	DIODE MA152WK		
D612	8-719-110-03	DIODE RD7.5ES-B2		
D613	8-719-400-18	DIODE MA152WK		
D614	8-719-400-18	DIODE MA152WK		

<IC>

REF.NO.	PART NO.	DESCRIPTION		REMARK
IC001	8-752-037-04	IC CX-7948A		
IC005	8-752-058-71	IC CXA1656S		
IC072	8-759-073-14	IC X24C16P		
IC201	8-759-073-30	IC TDA6612		
IC202	8-759-502-21	IC TDA2822M		
IC251	8-759-072-99	IC TDA2052		
IC261	8-759-072-99	IC TDA2052		
IC301	8-759-073-15	IC TDA9145/NI		
IC302	8-759-505-39	IC TDA4660V2		
IC304	8-752-056-54	IC CXA1587S		
IC401	8-752-062-86	IC CXA1545AS		
IC402	8-759-073-00	IC TEA2114		
IC502	8-752-057-18	IC CXA1315P		
IC681	8-759-072-98	IC TDA8138A		
IC682	8-759-604-35	IC M5F78M05		
IC683	8-759-982-10	IC RC7809FA		

<IF BLOCK>

REF.NO.	PART NO.	DESCRIPTION		REMARK
IFB101	1-466-735-11	IF BLOCK (IFH-389F)		

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L101	1-412-546-21	INDUCTOR	560UH	
L102	1-408-413-00	INDUCTOR	22UH	
L201	1-410-067-21	INDUCTOR	4.7MMH	
L306	1-410-466-41	INDUCTOR	4.7UH	
L308	1-410-478-11	INDUCTOR	47UH	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
L444	1-410-476-11	INDUCTOR 33UH	
L501 ⚠	1-460-196-11	COIL, HORIZONTAL LINEARITY	
L502	1-410-645-31	INDUCTOR 100UH	
L503	1-408-420-00	INDUCTOR 82UH	
L504	1-412-546-21	INDUCTOR 560UH	
L505	1-459-313-00	COIL WITH CORE (HWC)	
L507	1-459-313-00	COIL WITH CORE (HWC)	
L508	1-412-546-21	INDUCTOR 560UH	
L610	1-412-539-21	INDUCTOR 150UH	
L611	1-412-539-21	INDUCTOR 150UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q071	8-729-901-05	TRANSISTOR DTA124EK	
Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
Q102	8-729-901-00	TRANSISTOR DTC124EK	
Q103	8-729-901-06	TRANSISTOR DTA144EK	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q209	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q301	8-729-901-00	TRANSISTOR DTC124EK	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q304	8-729-900-53	TRANSISTOR DTC114EK	
Q305	8-729-901-01	TRANSISTOR DTC144EK	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q309	8-729-931-02	TRANSISTOR 2SC2413K-Q	
Q310	8-729-901-00	TRANSISTOR DTC124EK	
Q311	8-729-901-06	TRANSISTOR DTA144EK	
Q312	8-729-900-53	TRANSISTOR DTC114EK	
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q444	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q445	8-729-216-22	TRANSISTOR 2SA1162-G	
Q501	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q502	8-729-014-88	TRANSISTOR 2SC4891-CA	
Q503	8-729-216-22	TRANSISTOR 2SA1162-G	
Q504	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q505	8-729-201-32	TRANSISTOR 2SA1013-O	
Q506	8-729-201-32	TRANSISTOR 2SA1013-O	
Q507	8-729-304-92	TRANSISTOR 2SB649A-C	
Q508	8-729-204-16	TRANSISTOR 2SA1301-O	
Q509	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q515	8-729-216-22	TRANSISTOR 2SA1162-G	
Q516	8-729-216-22	TRANSISTOR 2SA1162-G	
Q517	8-729-216-22	TRANSISTOR 2SA1162-G	
Q518	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q519	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q520	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q524	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q525	8-729-901-00	TRANSISTOR DTC124EK	
Q581	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q582	8-729-216-22	TRANSISTOR 2SA1162-G	
Q610	8-729-140-97	TRANSISTOR 2SB734-34	
Q611	8-729-900-53	TRANSISTOR DTC114EK	
Q612	8-729-216-22	TRANSISTOR 2SA1162-G	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR1	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR2	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR3	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR4	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR5	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR6	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR7	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR8	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR9	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR10	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR11	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR12	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR13	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR14	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR15	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR16	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR17	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR18	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR19	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR20	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR21	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR22	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR23	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR24	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR25	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR26	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR27	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR28	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR29	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR30	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR31	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR32	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR33	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR34	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR35	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR36	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR38	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR39	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR40	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR41	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR42	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR43	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR44	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR45	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR46	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR47	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR48	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR49	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR50	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR51	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR52	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR53	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR54	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR55	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR56	1-216-296-00	METAL GLAZE 0 5% 1/8W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR57	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR58	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR59	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR60	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR61	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR62	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR63	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR64	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR65	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR66	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR67	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR68	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR69	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR70	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR71	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR72	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR73	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR74	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR75	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR76	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR77	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR78	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR79	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR80	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR81	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR82	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR83	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR84	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR85	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR86	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR87	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR88	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR89	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR90	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR91	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR92	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR93	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR100	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR110	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR124	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR234	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JW214	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R071	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R072	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R073	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R074	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
R076	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R077	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R101	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R102	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R103	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R105	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R108	1-216-230-00	METAL GLAZE 22K 5% 1/8W	
R115	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W	
R201	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W	
R202	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W	
R203	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R204	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R207	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R208	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R209	1-249-377-11	CARBON 0.47 5% 1/4W	F
R210	1-247-739-11	CARBON 100 5% 1/2W	
R211	1-247-739-11	CARBON 100 5% 1/2W	
R212	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R213	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R214	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R215	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R216	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R217	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R218	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R221	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R222	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R223	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R224	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R225	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R226	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R227	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R228	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R229	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R230	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R231	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R232	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R233	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R234	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R235	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R236	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R237	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R238	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R239	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R240	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R241	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R242	1-216-218-00	METAL GLAZE 6.8K 5% 1/8W	
R243	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R244	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R245	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R247	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R248	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R249	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R250	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R251	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R252	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R253	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R254	1-216-252-00	METAL GLAZE 180K 5% 1/8W	
R255	1-216-252-00	METAL GLAZE 180K 5% 1/8W	
R256	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R257	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R259	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R260	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R300	1-216-009-00	METAL GLAZE 22 5% 1/10W	
R301	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R302	1-216-178-00	METAL GLAZE 150 5% 1/8W	
R303	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R304	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R305	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R306	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R307	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R308	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R309	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R310	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R311	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R312	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R313	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R314	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R315	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R316	1-216-097-00	METAL GLAZE 100K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R317	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R319	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R320	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R321	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R324	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R325	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R326	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R328	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R329	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R330	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R331	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R333	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R334	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R335	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R336	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R337	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R338	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R339	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R340	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R341	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R342	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R343	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R344	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R345	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R346	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R347	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R348	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R349	1-216-020-00	METAL GLAZE	62	5%	1/10W	
R350	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R351	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R352	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R354	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R355	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R356	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R357	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R358	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R359	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R360	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R361	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R362	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R365	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R366	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R367	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R368	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R369	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R370	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R371	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R373	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R376	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R377	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R378	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R379	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R380	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R401	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R402	1-216-158-00	METAL GLAZE	22	5%	1/8W	
R403	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R404	1-216-158-00	METAL GLAZE	22	5%	1/8W	
R405	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R406	1-216-158-00	METAL GLAZE	22	5%	1/8W	
R407	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R408	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R410	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R411	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R412	1-216-171-00	METAL GLAZE	75	5%	1/8W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R413	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R414	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R416	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R417	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R419	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R420	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R423	1-216-015-00	METAL GLAZE	39	5%	1/10W	
R424	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R425	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R426	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R427	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R428	1-249-393-11	CARBON	10	5%	1/4W	F
R446	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R447	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R501	1-247-895-00	CARBON	470K	5%	1/4W	
R502	1-249-377-11	CARBON	0.47	5%	1/4W	F
R503	1-249-377-11	CARBON	0.47	5%	1/4W	F
R504	1-249-417-11	CARBON	1K	5%	1/4W	
R505	1-249-423-11	CARBON	3.3K	5%	1/4W	
R506	1-215-920-11	METAL OXIDE	3.3K	5%	3W	F
R507	1-249-429-11	CARBON	10K	5%	1/4W	F
R508	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R509	1-216-478-11	METAL OXIDE	390	5%	3W	F
R510	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R511	1-249-407-11	CARBON	150	5%	1/4W	
R512	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R513	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R514	1-216-441-00	METAL OXIDE	27K	5%	1W	F
R515	1-249-432-11	CARBON	18K	5%	1/4W	F
R516	1-249-417-11	CARBON	1K	5%	1/4W	
R517	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R518	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R519	1-249-417-11	CARBON	1K	5%	1/4W	F
R520	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R521	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R522	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R523	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R524	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R525	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R526	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R527	1-249-429-11	CARBON	10K	5%	1/4W	
R528	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R531	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R532	1-249-385-11	CARBON	2.2	5%	1/4W	F
R533	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R536	1-216-476-11	METAL OXIDE	180	5%	3W	F
R537	1-216-476-11	METAL OXIDE	180	5%	3W	F
R540	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R541	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R542	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R543	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R544	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R545	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R546	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R547	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R548	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R549	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R550	1-249-385-11	CARBON	2.2	5%	1/4W	F
R551	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R552	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R553	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R554	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R555	1-249-421-11	CARBON	2.2K	5%	1/4W	F

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R556	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R558	1-249-385-11	CARBON	2.2	5%	1/4W	F
R563	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R564	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R565	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R566	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R567	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R568	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R569	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R570	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R571	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R572	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R573	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R574	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R575	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R576	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R577	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R579	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R581	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R582	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R583	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R584	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R586	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R587	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R588	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R589	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R590	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R591	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R592	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R593	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R594	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R595	1-216-643-11	METAL CHIP	470	0.50%	1/10W	
R596	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W	
R597	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R600	1-216-190-00	METAL GLAZE	470	5%	1/8W	
R606	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R609	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R610	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R611	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R613	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R614	1-216-399-00	METAL OXIDE	6.8	5%	3W	F
R615	1-216-474-11	METAL OXIDE	82	5%	3W	F
R616	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R617	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R618	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R620	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R621	1-216-399-00	METAL OXIDE	6.8	5%	3W	F
R622	1-216-474-11	METAL OXIDE	82	5%	3W	F
R623	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R624	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R625	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R626	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R627	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R628	1-215-866-11	METAL OXIDE	330	5%	1W	F
R629	1-216-488-11	METAL OXIDE	18K	5%	3W	F
R631	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R632	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R635	1-216-400-11	METAL OXIDE	8.2	5%	3W	F
R636	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R638	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R641	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R642	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R643	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R644	1-215-887-00	METAL OXIDE	150	5%	2W	F

REF.NO.	PART NO.	DESCRIPTION				REMARK
R644	1-215-912-11	METAL OXIDE	150	5%	3W	F
R645	1-215-887-00	METAL OXIDE	150	5%	2W	F
R645	1-215-912-11	METAL OXIDE	150	5%	3W	F
R646	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R650	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R651	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R653	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R654	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R655	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1520	1-249-429-11	CARBON	10K	5%	1/4W	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T501	1-439-545-11	TRANSFORMER, FERRITE
T502 ⚠	1-437-078-11	TRANSFORMER, HORIZONTAL DRIVE

<TUNER>

REF.NO.	PART NO.	DESCRIPTION
TU101	1-693-185-11	TUNER (UV916H)

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X301	1-567-504-11	OSCILLATOR, CRYSTAL
X302	1-567-505-11	OSCILLATOR, CRYSTAL
X501	1-577-099-11	VIBRATOR, CERAMIC

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1-466-735-11 IF BLOCK (IFH-389F)
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C1	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C2	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C3	1-124-903-11	ELECT	1MF	20%	50V
C4	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C6	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C7	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C8	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C9	1-126-233-11	ELECT	22MF	20%	25V
C10	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C11	1-124-477-11	ELECT	47MF	20%	16V
C13	1-163-059-00	CERAMIC CHIP	0.01MF	10%	50V
C14	1-124-477-11	ELECT	47MF	20%	16V
C15	1-124-903-11	ELECT	1MF	20%	50V
C16	1-163-061-00	CERAMIC CHIP	0.015MF	10%	50V
C17	1-162-638-11	CERAMIC CHIP	1MF		16V
C18	1-162-638-11	CERAMIC CHIP	1MF		16V
C19	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C20	1-124-902-00	ELECT	0.47MF	20%	50V
C21	1-124-903-11	ELECT	1MF	20%	50V
C22	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C23	1-124-902-00	ELECT	0.47MF	20%	50V
C24	1-164-506-11	CERAMIC CHIP	4.7MF		16V
C25	1-124-477-11	ELECT	47MF	20%	16V
C26	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C27	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C28	1-124-477-11	ELECT	47MF	20%	16V
C33	1-124-907-11	ELECT	10MF	20%	50V
C34	1-124-907-11	ELECT	10MF	20%	50V
C35	1-124-925-11	ELECT	2.2MF	20%	50V
C36	1-124-477-11	ELECT	47MF	20%	16V

IF

REF.NO.	PART NO.	DESCRIPTION			REMARK
C37	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C38	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C40	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C71	1-124-477-11	ELECT	47MF	20%	16V
C72	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C80	1-124-477-11	ELECT	47MF	20%	16V
C83	1-124-477-11	ELECT	47MF	20%	16V
C84	1-124-477-11	ELECT	47MF	20%	16V
C85	1-124-477-11	ELECT	47MF	20%	16V
C86	1-124-477-11	ELECT	47MF	20%	16V
C87	1-124-477-11	ELECT	47MF	20%	16V
C91	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C95	1-164-337-11	CERAMIC CHIP	2.2MF		16V
C101	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C102	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C104	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C105	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C106	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C121	1-126-176-11	ELECT	220MF	20%	10V
C122	1-163-119-00	CERAMIC CHIP	120PF	5%	50V

<FILTER>

CF1	1-527-839-00	FILTER, CERAMIC
CF2	1-567-569-11	FILTER, CERAMIC
CF3	1-527-840-00	FILTER, CERAMIC
CF4	1-567-570-11	FILTER, CERAMIC
SWF1	1-579-662-11	FILTER, SURFACE WAVE
SWF3	1-404-711-11	SAWF
SWF4	1-579-660-11	FILTER, SAWTOOTH WAVE

<CONNECTOR>

CN1	*1-506-913-11	PIN, CONNECTOR 10P
CN2	*1-506-913-11	PIN, CONNECTOR 10P

<TRIMMER>

CT1	1-404-801-11	TRAP, CERAMIC
CT2	1-409-429-11	TRAP, CERAMIC
CV1	1-141-245-00	CAP, TRIMMER
CV2	1-141-245-00	CAP, TRIMMER
CV3	1-141-304-21	TRIMMER, CERAMIC

<DIODE>

D7	8-719-421-57	DIODE MA73-TX
D8	8-719-421-57	DIODE MA73-TX
D9	8-719-421-57	DIODE MA73-TX

<IC>

IC1	8-759-070-75	IC M52312SP
IC2	8-759-070-71	IC TDA9820
IC3	8-759-979-62	IC PCF8574

<COIL>

L1	1-408-419-00	INDUCTOR	68UH
L2	1-408-419-00	INDUCTOR	68UH
L3	1-408-407-00	INDUCTOR	6.8UH
L4	1-408-419-00	INDUCTOR	68UH
L5	1-408-419-00	INDUCTOR	68UH
L7	1-408-406-00	INDUCTOR	5.6UH
L9	1-408-419-00	INDUCTOR	68UH

REF.NO.	PART NO.	DESCRIPTION		REMARK
L71	1-408-419-00	INDUCTOR	68UH	
L101	1-408-399-00	INDUCTOR	1.5UH	
L121	1-408-407-00	INDUCTOR	6.8UH	

<TRANSISTOR>

Q1	8-729-901-59	TRANSISTOR BF199
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q5	8-729-115-10	TRANSISTOR 2SK105A-10
Q6	8-729-900-52	TRANSISTOR DTC114YK
Q7	8-729-216-22	TRANSISTOR 2SA1162-G
Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q10	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q12	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q13	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q14	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q15	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q16	8-729-216-22	TRANSISTOR 2SA1162-G
Q101	8-729-104-80	TRANSISTOR 2SC3355
Q121	8-729-120-28	TRANSISTOR 2SC1623-L5L6

<RESISTOR>

JR2	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR3	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR5	1-216-296-00	METAL GLAZE	0	5%	1/8W
R1	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R3	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R4	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5	1-216-021-00	METAL GLAZE	68	5%	1/10W
R6	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R8	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R9	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R10	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R11	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R24	1-216-280-00	METAL GLAZE	2.7M	5%	1/8W
R25	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R26	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R27	1-216-266-00	METAL GLAZE	680K	5%	1/8W
R28	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R29	1-216-035-00	METAL GLAZE	270	5%	1/10W
R30	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R31	1-216-017-00	METAL GLAZE	47	5%	1/10W
R32	1-216-043-00	METAL GLAZE	560	5%	1/10W
R33	1-216-037-00	METAL GLAZE	330	5%	1/10W
R34	1-216-252-00	METAL GLAZE	180K	5%	1/8W
R35	1-216-035-00	METAL GLAZE	270	5%	1/10W
R36	1-216-029-00	METAL GLAZE	150	5%	1/10W
R37	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R38	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R39	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R40	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R42	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R43	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R44	1-216-027-00	METAL GLAZE	120	5%	1/10W
R45	1-216-041-00	METAL GLAZE	470	5%	1/10W
R46	1-216-031-00	METAL GLAZE	180	5%	1/10W
R47	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R48	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R49	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R53	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R54	1-216-043-00	METAL GLAZE	560	5%	1/10W

IF **G**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R55	1-216-043-00	METAL GLAZE	560	5%	1/10W
R56	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R57	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R58	1-216-041-00	METAL GLAZE	470	5%	1/10W
R59	1-216-043-00	METAL GLAZE	560	5%	1/10W
R60	1-216-043-00	METAL GLAZE	560	5%	1/10W
R61	1-216-295-00	METAL GLAZE	0	5%	1/10W
R63	1-216-043-00	METAL GLAZE	560	5%	1/10W
R71	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R72	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R73	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R74	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R75	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R76	1-216-025-00	METAL GLAZE	100	5%	1/10W
R77	1-216-174-00	METAL GLAZE	100	5%	1/8W
R81	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R82	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R83	1-216-025-00	METAL GLAZE	100	5%	1/10W
R84	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R85	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R86	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R87	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R88	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R89	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R90	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R91	1-216-295-00	METAL GLAZE	0	5%	1/10W
R92	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R93	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R94	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R95	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R96	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R97	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R98	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R99	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R100	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R102	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R103	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R104	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R105	1-216-033-00	METAL GLAZE	220	5%	1/10W
R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R122	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R123	1-216-041-00	METAL GLAZE	470	5%	1/10W
R124	1-216-041-00	METAL GLAZE	470	5%	1/10W
R125	1-216-041-00	METAL GLAZE	470	5%	1/10W
R301	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R302	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R303	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R304	1-216-037-00	METAL GLAZE	330	5%	1/10W
R305	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R306	1-216-025-00	METAL GLAZE	100	5%	1/10W
R307	1-216-037-00	METAL GLAZE	330	5%	1/10W
R308	1-216-037-00	METAL GLAZE	330	5%	1/10W

<VARIABLE RESISTOR>

RV2	1-241-120-11	RES, ADJ, CARBON 2.2K

<TRANSFORMER>

T1	1-404-806-21	COIL
T3	1-416-012-11	COIL
T4	1-416-012-11	COIL

REF.NO.	PART NO.	DESCRIPTION	REMARK

<CRYSTAL>

X1	1-579-648-21	VIBRATOR, CERAMIC

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	*A-1316-137-A	G BOARD, COMPLETE *****************
	*4-341-751-01	EYELET (EY1~EY107)
	*4-341-752-01	EYELET (EY108~EY115)
	4-382-854-11	SCREW (M3X10), P, SW (+)

<CAPACITOR>

C601	1-165-137-91	CERAMIC	4700PF	10%	500V
C602	1-130-317-91	FILM	0.068MF	5%	100V
C603	1-124-634-11	ELECT	1MF	20%	250V
C604	1-124-903-11	ELECT	1MF	20%	50V
C605	1-164-143-11	CERAMIC	0.001MF	10%	1KV
C606	1-124-563-11	ELECT	2200MF	20%	25V
C607	1-124-563-11	ELECT	2200MF	20%	25V
C608	1-124-810-11	ELECT	100MF	20%	200V
C609	1-137-141-11	FILM	0.082MF	3%	600V
C612	1-124-563-11	ELECT	2200MF	20%	25V
C613	1-124-557-11	ELECT	1000MF	20%	25V
C614	1-123-939-00	ELECT	10MF	20%	200V
C615	1-124-798-11	ELECT	1MF	20%	160V
C616	1-124-557-11	ELECT	1000MF	20%	25V
C617	1-164-143-11	CERAMIC	0.001MF	10%	1KV
C618	1-136-853-11	FILM	0.56MF	5%	200V
C619	1-164-735-11	CAP, CERAMIC	1500PF		
C620	1-136-721-21	FILM	1.5MF	10%	400V
C621	1-164-143-11	CERAMIC	0.001MF	10%	1KV
C622	1-136-853-11	FILM	0.56MF	5%	200V
C623	1-137-087-11	FILM	0.068MF	3%	0
C624	1-124-171-00	ELECT	100MF	20%	160V
C625	1-126-183-11	ELECT	1000MF	20%	16V
C626	1-124-472-11	ELECT	470MF	20%	6.3V
C627	1-124-480-11	ELECT	470MF	20%	25V
C628	1-165-137-91	CERAMIC	4700PF	10%	500V
C629	1-124-618-11	ELECT	2200MF	20%	35V
C630	1-164-085-11	CERAMIC	0.001MF	10%	50V
C631	1-124-910-11	ELECT	47MF	20%	50V
C632	1-124-903-11	ELECT	1MF	20%	50V
C633	1-130-483-00	MYLAR	0.01MF	5%	50V
C634	1-124-477-11	ELECT	47MF	20%	16V
C636	1-129-726-00	FILM	0.1MF	10%	630V
C643	1-124-935-11	ELECT	470MF	20%	100V
C646	1-124-907-11	ELECT	10MF	20%	50V
C647	1-124-618-11	ELECT	2200MF	20%	35V
C648	1-124-618-11	ELECT	2200MF	20%	35V
C660	1-164-085-11	CERAMIC	0.001MF	10%	50V
C661	1-101-006-00	CERAMIC	0.047MF		50V
C662	1-124-477-11	ELECT	47MF	20%	16V
C663	1-126-105-11	ELECT	1000MF	20%	35V
C664	1-124-618-11	ELECT	2200MF	20%	35V
C665	1-129-726-00	FILM	0.1MF	10%	630V
C670	1-164-085-11	CERAMIC	0.001MF	10%	50V
C680	1-125-497-11	ELECT(BLOCK)	100MF	20%	400V
C693	1-124-910-11	ELECT	47MF	20%	50V

<CONNECTOR>

CN1605	*1-568-879-51	PIN, CONNECTOR 4P

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN1627	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1628	*1-568-881-51	PIN, CONNECTOR 6P	
CN1650	*1-568-878-51	PIN, CONNECTOR 3P	
CN1651	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN1652	*1-564-511-51	PLUG, CONNECTOR 8P	
CN1653	*1-568-879-81	PIN, CONNECTOR 4P	
CN1654	*1-564-508-11	PLUG, CONNECTOR 5P	
CN1655	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN1656	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D602	8-719-979-58	DIODE EGP10D	
D603	8-719-500-67	DIODE D5KC40H	
D604	8-719-510-09	DIODE D10SC6M	
D605	8-719-988-31	DIODE D10SC6MR	
D607	8-719-025-81	DIODE S3V10SB	
D608	8-719-109-85	DIODE RD5.1ES-B2	
D609	8-719-921-42	DIODE MTZJ-5.1A	
D610	8-719-979-58	DIODE EGP10D	
D611	8-719-979-58	DIODE EGP10D	
D613	8-719-303-57	DIODE RU2AM	
D614	8-719-979-58	DIODE EGP10D	
D615	8-719-975-76	DIODE SB-140	
D616	8-719-025-81	DIODE S3V10SB	
D617	8-719-110-03	DIODE RD7.5ES-B2	
D618	8-719-911-19	DIODE 1SS119	
D619	8-719-975-76	DIODE SB-140	
D620 ⚠	8-719-988-31	DIODE D10SC6MR	
D621	8-719-911-55	DIODE U05G	
D622	8-719-911-55	DIODE U05G	
D623	8-719-922-18	DIODE MTZJ-24C	
D624	8-719-109-89	DIODE RD5.6ES-B2	
D626	8-719-911-55	DIODE U05G	
D628	8-719-110-49	DIODE RD18ES-B2	
D629	8-719-911-19	DIODE 1SS119	
D630 ⚠	8-719-510-09	DIODE D10SC6M	
D631 ⚠	8-719-988-31	DIODE D10SC6MR	
D632	8-719-500-67	DIODE D5KC40H	
D633	8-719-903-61	DIODE SLP361B	
D634	8-719-911-19	DIODE 1SS119	
D636	8-719-109-85	DIODE RD5.1ES-B2	
D638	8-719-911-19	DIODE 1SS119	
D639	8-719-981-00	DIODE ERC81-004	
D640 ⚠	8-719-510-09	DIODE D10SC6M	
D641	8-719-921-80	DIODE MTZJ-11B	
D650	8-719-160-81	DIODE RD27F-B2	

<FERRITE BEAD>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB602	1-410-397-21	FERRITE BEAD INDUCTOR	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR	
FB606	1-410-397-21	FERRITE BEAD INDUCTOR	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR	
FB608	1-410-396-41	FERRITE BEAD INDUCTOR	
FB609	1-410-397-21	FERRITE BEAD INDUCTOR	
FB612	1-410-397-21	FERRITE BEAD INDUCTOR	
FB622	1-410-397-21	FERRITE BEAD INDUCTOR	
FB623	1-410-397-21	FERRITE BEAD INDUCTOR	
FB630	1-410-396-41	FERRITE BEAD INDUCTOR	
FB631	1-410-396-41	FERRITE BEAD INDUCTOR	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC601 ⚠	8-749-921-89	IC SE115N	
IC605	8-759-982-21	IC RC78L05A	
IC606	8-759-506-79	IC IR3M02	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L602	1-459-862-11	COIL, CHOKE 90UH	
L603	1-459-862-11	COIL, CHOKE 90UH	
L604	1-408-404-00	INDUCTOR 3.9UH	
L605	1-412-526-11	INDUCTOR 12UH	
L606	1-459-862-11	COIL, CHOKE 90UH	
L607	1-408-404-00	INDUCTOR 3.9UH	
L610	1-424-602-11	COIL, CHOKE 800UH	
L611	1-412-546-41	INDUCTOR 560UH	
L612	1-412-540-41	INDUCTOR 180UH	
L613	1-412-522-21	INDUCTOR 5.6UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q603	8-729-011-15	TRANSISTOR 2SC4582NP	
Q604	8-729-802-84	TRANSISTOR 2SC1755-D	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q608	8-729-906-39	TRANSISTOR 2SC3271-P	
Q609	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q610	8-729-820-82	TRANSISTOR 2SA1208-S	
Q611	8-729-820-82	TRANSISTOR 2SA1208-S	
Q612	8-729-386-12	TRANSISTOR 2SB861-C	
Q613	8-729-209-15	TRANSISTOR 2SD2012	
Q614	8-729-011-15	TRANSISTOR 2SC4582NP	
Q615	8-729-820-82	TRANSISTOR 2SA1208-S	
Q616	8-729-208-39	TRANSISTOR 2SA1306A-Y	
Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q621	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q623	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q624	8-729-103-80	TRANSISTOR 2SA1261-K	
Q629	8-729-378-84	TRANSISTOR 2SD788-5	
Q630	8-729-255-12	TRANSISTOR 2SC2551-O	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R604	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R605	1-249-428-11	CARBON 8.2K 5% 1/4W	
R606	1-214-919-00	CARBON 180K 5% 1/2W	
R607	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R609	1-249-438-11	CARBON 56K 5% 1/4W	F
R611	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R612	1-202-883-11	SOLID 680K 20% 1/2W	
R613	1-216-386-11	METAL OXIDE 0.56 5% 3W	F
R614	1-249-418-11	CARBON 1.2K 5% 1/4W	
R615	1-215-436-00	METAL 4.3K 1% 1/4W	
R616	1-214-742-00	METAL 3.6K 1% 1/4W	
R617	1-216-356-00	METAL OXIDE 3.9 5% 1W	F
R618	1-249-418-11	CARBON 1.2K 5% 1/4W	
R619	1-216-444-11	METAL OXIDE 82K 5% 1W	F
R620	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R621	1-247-691-11	CARBON 18 5% 1/4W	F
R622	1-249-424-11	CARBON 3.9K 5% 1/4W	F
R623	1-249-417-11	CARBON 1K 5% 1/4W	
R624	1-214-779-00	METAL 120K 1% 1/4W	
R625	1-216-386-11	METAL OXIDE 0.56 5% 3W	F
R626	1-216-356-00	METAL OXIDE 3.9 5% 1W	F
R627	1-202-883-11	SOLID 680K 20% 1/2W	
R628	1-249-410-11	CARBON 270 5% 1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R629	1-216-389-11	METAL OXIDE 1 5% 3W	F
R631	1-249-417-11	CARBON 1K 5% 1/4W	F
R632	1-214-913-00	METAL 100K 1% 1/2W	
R633	1-249-429-11	CARBON 10K 5% 1/4W	
R634	1-249-441-11	CARBON 100K 5% 1/4W	
R638	1-249-405-11	CARBON 100 5% 1/4W	F
R640	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R641	1-249-429-11	CARBON 10K 5% 1/4W	
R642	1-215-421-00	METAL 1K 1% 1/4W	
R643	1-260-123-11	CARBON 100K 5% 1/2W	
R644	1-249-415-11	CARBON 680 5% 1/4W	
R645	1-249-417-11	CARBON 1K 5% 1/4W	
R646	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R647	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R649	1-249-424-11	CARBON 3.9K 5% 1/4W	
R650	1-249-377-11	CARBON 0.47 5% 1/4W	F
R651	1-215-429-00	METAL 2.2K 1% 1/4W	
R652	1-215-472-00	METAL 130K 1% 1/4W	
R654	1-215-436-00	METAL 4.3K 1% 1/4W	
R655	1-249-426-11	CARBON 5.6K 5% 1/4W	
R656	1-215-454-00	METAL 24K 1% 1/4W	
R657	1-216-386-11	METAL OXIDE 0.56 5% 3W	F
R658	1-216-386-11	METAL OXIDE 0.56 5% 3W	F
R660	1-249-413-11	CARBON 470 5% 1/4W	
R666	1-249-377-11	CARBON 0.47 5% 1/4W	F
R669	1-249-377-11	CARBON 0.47 5% 1/4W	F
R671	1-249-405-11	CARBON 100 5% 1/4W	
R672	1-215-415-00	METAL 560 1% 1/4W	
R673	1-215-429-00	METAL 2.2K 1% 1/4W	
R674	1-249-433-11	CARBON 22K 5% 1/4W	
R675	1-249-377-11	CARBON 0.47 5% 1/4W	F
R676	1-249-428-11	CARBON 8.2K 5% 1/4W	
R677	1-249-425-11	CARBON 4.7K 5% 1/4W	
R678	1-249-433-11	CARBON 22K 5% 1/4W	
R679	1-215-457-00	METAL 33K 1% 1/4W	
R680	1-216-433-00	METAL OXIDE 1.2K 5% 1W	F
R681	1-216-341-11	WIREWOUND 0.22 10% 1/2W	
R683	1-215-429-00	METAL 2.2K 1% 1/4W	
R684	1-215-421-00	METAL 1K 1% 1/4W	
R686	1-249-377-11	CARBON 0.47 5% 1/4W	F
R687	1-249-417-11	CARBON 1K 5% 1/4W	F
R690	1-216-482-11	METAL OXIDE 1.8K 5% 3W	F
R691	1-249-421-11	CARBON 2.2K 5% 1/4W	
R692	1-215-436-00	METAL 4.3K 1% 1/4W	
R694	1-249-421-11	CARBON 2.2K 5% 1/4W	
R697	1-249-382-11	CARBON 1.2 5% 1/4W	F
R699	1-249-377-11	CARBON 0.47 5% 1/4W	F

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV601	1-241-627-11	RES, ADJ, CARBON 1K	
RV603	1-241-627-11	RES, ADJ, CARBON 1K	

<RELAY>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RY601 ⚠	1-515-805-11	RELAY, POWER	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T601 ⚠	1-423-326-11	TRANSFORMER, CONVERTER (PIT)	
T603 ⚠	1-424-020-11	PRT	
T604 ⚠	1-450-149-11	TRANSFORMER, HEATER	
T605 ⚠	1-421-862-11	LFT	
T606 ⚠	1-423-327-11	TRANSFORMER, CONVERTER	
T607 ⚠	1-424-436-11	TRANSFORMER, LINE FILTER	
T608 ⚠	1-423-325-11	TRANSFORMER, FERRITE (SBT)	

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*A-1331-228-A CR BOARD, COMPLETE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*4-341-751-01	EYELET (EY4,EY5,EY16,EY18)	
	*4-341-752-01	EYELET (EY1~EY3)	
	4-373-933-01	SHEET (TRANSISTOR), BN	
	*4-389-343-01	SPRING	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C701	1-162-115-00	CERAMIC 330PF 10% 2KV	
C702	1-123-948-00	ELECT 22MF 20% 250V	
C703	1-102-050-00	CERAMIC 0.01MF 500V	
C704	1-162-115-00	CERAMIC 330PF 10% 2KV	
C705	1-130-479-00	MYLAR 0.0047MF 5% 50V	
C706	1-101-006-00	CERAMIC 0.047MF 50V	
C707	1-101-006-00	CERAMIC 0.047MF 50V	
C709	1-124-120-11	ELECT 220MF 20% 16V	
C710	1-124-120-11	ELECT 220MF 20% 16V	
C711	1-102-112-00	CERAMIC 330PF 10% 50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CR1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CR3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CR4	*1-564-511-11	PLUG, CONNECTOR 8P	
CR15	*1-568-880-71	PIN, CONNECTOR 5P	

<PICTURE TUBE SOCKET>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CRT701 ⚠	1-251-026-11	SOCKET, PICTURE TUBE	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D701	8-719-911-19	DIODE 1SS119	
D702	8-719-911-19	DIODE 1SS119	
D703	8-719-911-19	DIODE 1SS119	
D704	8-719-911-19	DIODE 1SS119	
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D707	8-719-921-88	DIODE MTZJ-13B	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L701	1-408-429-00	INDUCTOR 470UH	
L702	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L703	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L704	1-408-413-00	INDUCTOR 22UH	

<NEON LAMP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
NL701	1-519-108-99	LAMP, NEON	
NL702	1-519-108-99	LAMP, NEON	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q704	8-729-255-12	TRANSISTOR 2SC2551-O	
Q705	8-729-200-17	TRANSISTOR 2SA1091-O	

CR **CG**

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q706	8-729-200-17	TRANSISTOR 2SA1091-0				
		<RESISTOR>				
R701	1-202-847-00	SOLID	560K	20%	1/2W	
R702	1-202-814-11	SOLID	33K	20%	1/2W	
R703	1-202-818-00	SOLID	1K	20%	1/2W	
R704	1-202-842-11	SOLID	220K	20%	1/2W	
R705	1-202-828-11	SOLID	6.8K	20%	1/2W	
R706	1-202-561-00	SOLID	330	5%	1/2W	
R707	1-216-510-11	METAL OXIDE	8.2K	5%	5W	F
R708	1-249-405-11	CARBON	100	5%	1/4W	F
R709	1-249-405-11	CARBON	100	5%	1/4W	F
R710	1-215-927-00	METAL OXIDE	47K	5%	3W	F
R711	1-249-405-11	CARBON	100	5%	1/4W	F
R712	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R714	1-249-401-11	CARBON	47	5%	1/4W	
R716	1-249-405-11	CARBON	100	5%	1/4W	
R717	1-249-399-11	CARBON	33	5%	1/4W	
R718	1-249-412-11	CARBON	390	5%	1/4W	
R719	1-249-407-11	CARBON	150	5%	1/4W	
R720	1-249-405-11	CARBON	100	5%	1/4W	
R721	1-249-409-11	CARBON	220	5%	1/4W	
R722	1-215-423-00	METAL	1.2K	1%	1/4W	
R724	1-215-429-00	METAL	2.2K	1%	1/4W	
		<VARIABLE RESISTOR>				
RV701	1-249-410-11	CARBON	270	5%	1/4W	
		<SPARK GAP>				
SG701	1-519-422-11	GAP, SPARK				
SG702	1-519-422-11	GAP, SPARK				
**						
	*A-1331-229-A	CG BOARD, COMPLETE				
		******************				
	*4-341-751-01	EYELET (EY9,EY10,EY17)				
	*4-341-752-01	EYELET (EY6~EY8)				
	4-373-933-01	SHEET (TRANSISTOR), BN				
	*4-389-343-01	SPRING				
		<CAPACITOR>				
C731	1-162-115-00	CERAMIC	330PF	10%	2KV	
C732	1-123-948-00	ELECT	22MF	20%	250V	
C733	1-102-050-00	CERAMIC	0.01MF		500V	
C734	1-162-115-00	CERAMIC	330PF	10%	2KV	
C735	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C736	1-101-006-00	CERAMIC	0.047MF		50V	
C737	1-101-006-00	CERAMIC	0.047MF		50V	
C739	1-124-120-11	ELECT	220MF	20%	16V	
C740	1-124-120-11	ELECT	220MF	20%	16V	
C741	1-102-112-00	CERAMIC	330PF	10%	50V	
		<CONNECTOR>				
CG1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CG3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CG16	*1-568-880-81	PIN, CONNECTOR 5P				
		<PICTURE TUBE SOCKET>				

REF.NO.	PART NO.	DESCRIPTION				REMARK
CRT731⚠	1-251-026-11	SOCKET, PICTURE TUBE				
		<DIODE>				
D731	8-719-911-19	DIODE 1SS119				
D732	8-719-911-19	DIODE 1SS119				
D733	8-719-911-19	DIODE 1SS119				
D734	8-719-911-19	DIODE 1SS119				
D735	8-719-911-19	DIODE 1SS119				
D736	8-719-911-19	DIODE 1SS119				
D737	8-719-911-19	DIODE 1SS119				
		<COIL>				
L731	1-408-429-00	INDUCTOR	470UH			
L732	1-408-159-00	COIL, SPOOK CHOKE	3.3UH			
L733	1-408-159-00	COIL, SPOOK CHOKE	3.3UH			
L734	1-408-413-00	INDUCTOR	22UH			
		<NEON LAMP>				
NL731	1-519-108-99	LAMP, NEON				
NL732	1-519-108-99	LAMP, NEON				
		<TRANSISTOR>				
Q731	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q732	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q733	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q734	8-729-255-12	TRANSISTOR 2SC2551-0				
Q735	8-729-200-17	TRANSISTOR 2SA1091-0				
Q736	8-729-200-17	TRANSISTOR 2SA1091-0				
		<RESISTOR>				
R731	1-202-847-00	SOLID	560K	20%	1/2W	
R732	1-202-814-11	SOLID	33K	20%	1/2W	
R733	1-202-818-00	SOLID	1K	20%	1/2W	
R734	1-202-842-11	SOLID	220K	20%	1/2W	
R735	1-202-828-11	SOLID	6.8K	20%	1/2W	
R736	1-202-561-00	SOLID	330	5%	1/2W	
R737	1-216-510-11	METAL OXIDE	8.2K	5%	5W	F
R738	1-249-405-11	CARBON	100	5%	1/4W	F
R739	1-249-405-11	CARBON	100	5%	1/4W	F
R740	1-215-927-00	METAL OXIDE	47K	5%	3W	F
R741	1-249-405-11	CARBON	100	5%	1/4W	F
R742	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R744	1-249-401-11	CARBON	47	5%	1/4W	
R745	1-215-455-00	METAL	27K	1%	1/4W	
R746	1-249-405-11	CARBON	100	5%	1/4W	
R747	1-249-399-11	CARBON	33	5%	1/4W	
R748	1-249-412-11	CARBON	390	5%	1/4W	
R749	1-249-410-11	CARBON	270	5%	1/4W	
R750	1-249-405-11	CARBON	100	5%	1/4W	
R751	1-249-409-11	CARBON	220	5%	1/4W	
R752	1-215-423-00	METAL	1.2K	1%	1/4W	
R754	1-215-429-00	METAL	2.2K	1%	1/4W	
		<SPARK GAP>				
SG731	1-519-422-11	GAP, SPARK				
SG732	1-519-422-11	GAP, SPARK				

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

CB **DS**

REF.NO.	PART NO.	DESCRIPTION				REMARK
**						
	*A-1331-230-A	CB BOARD, COMPLETE				
		******************				
	*4-341-751-01	EYELET (EY14,EY15)				
	*4-341-752-01	EYELET (EY11~EY13)				
	4-373-933-01	SHEET (TRANSISTOR), BN				
	*4-389-343-01	SPRING				
		<CAPACITOR>				
C761	1-162-115-00	CERAMIC	330PF	10%	2KV	
C762	1-123-948-00	ELECT	22MF	20%	250V	
C763	1-102-050-00	CERAMIC	0.01MF		500V	
C764	1-162-115-00	CERAMIC	330PF	10%	2KV	
C765	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C766	1-101-006-00	CERAMIC	0.047MF		50V	
C767	1-101-006-00	CERAMIC	0.047MF		50V	
C769	1-124-120-11	ELECT	220MF	20%	16V	
C770	1-124-120-11	ELECT	220MF	20%	16V	
C771	1-102-112-00	CERAMIC	330PF	10%	50V	
		<CONNECTOR>				
CB1	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CB3	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CB4	*1-564-511-11	PLUG, CONNECTOR 8P				
CB5	*1-564-511-11	PLUG, CONNECTOR 8P				
CB17	*1-568-880-61	PIN, CONNECTOR 5P				
		<PICTURE TUBE SOCKET>				
CRT761⚠	1-251-026-11	SOCKET, PICTURE TUBE				
		<DIODE>				
D761	8-719-911-19	DIODE 1SS119				
D762	8-719-911-19	DIODE 1SS119				
D763	8-719-911-19	DIODE 1SS119				
D764	8-719-911-19	DIODE 1SS119				
D765	8-719-911-19	DIODE 1SS119				
D766	8-719-911-19	DIODE 1SS119				
D768	8-719-911-19	DIODE 1SS119				
		<COIL>				
L761	1-408-429-00	INDUCTOR	470UH			
L762	1-408-159-00	COIL, SPOOK CHOKE	3.3UH			
L763	1-408-159-00	COIL, SPOOK CHOKE	3.3UH			
L764	1-408-413-00	INDUCTOR	22UH			
		<NEON LAMP>				
NL761	1-519-108-99	LAMP, NEON				
NL762	1-519-108-99	LAMP, NEON				
		<TRANSISTOR>				
Q761	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q762	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q763	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q764	8-729-255-12	TRANSISTOR 2SC2551-0				
Q765	8-729-200-17	TRANSISTOR 2SA1091-0				
Q766	8-729-200-17	TRANSISTOR 2SA1091-0				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R761	1-202-847-00	SOLID	560K	20%	1/2W	
R762	1-202-814-11	SOLID	33K	20%	1/2W	
R763	1-202-818-00	SOLID	1K	20%	1/2W	
R764	1-202-842-11	SOLID	220K	20%	1/2W	
R765	1-202-828-11	SOLID	6.8K	20%	1/2W	
R766	1-202-561-00	SOLID	330	10%	1/2W	
R767	1-216-510-11	METAL OXIDE	8.2K	5%	5W	F
R768	1-249-405-11	CARBON	100	5%	1/4W	F
R769	1-249-405-11	CARBON	100	5%	1/4W	F
R770	1-215-927-00	METAL OXIDE	47K	5%	3W	F
R771	1-249-405-11	CARBON	100	5%	1/4W	F
R772	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R774	1-249-401-11	CARBON	47	5%	1/4W	
R776	1-249-405-11	CARBON	100	5%	1/4W	
R777	1-249-399-11	CARBON	33	5%	1/4W	
R778	1-249-412-11	CARBON	390	5%	1/4W	
R779	1-249-415-11	CARBON	680	5%	1/4W	
R780	1-249-405-11	CARBON	100	5%	1/4W	
R781	1-249-409-11	CARBON	220	5%	1/4W	
R782	1-215-423-00	METAL	1.2K	1%	1/4W	
R783	1-215-433-00	METAL	3.3K	1%	1/4W	
R784	1-215-429-00	METAL	2.2K	1%	1/4W	
R785	1-215-418-00	METAL	750	1%	1/4W	
		<SPARK GAP>				
SG761	1-519-422-11	GAP, SPARK				
SG762	1-519-422-11	GAP, SPARK				
**						
	*1-644-278-12	DS BOARD				
		********				
		<CAPACITOR>				
C1745	1-126-101-11	ELECT	100MF	20%	16V	
C1746	1-126-101-11	ELECT	100MF	20%	16V	
C1747	1-126-101-11	ELECT	100MF	20%	16V	
C1748	1-126-101-11	ELECT	100MF	20%	16V	
C1750	1-126-233-11	ELECT	22MF	20%	25V	
C1751	1-126-101-11	ELECT	100MF	20%	16V	
C1752	1-126-233-11	ELECT	22MF	20%	25V	
C1753	1-126-233-11	ELECT	22MF	20%	25V	
C1851	1-102-074-00	CERAMIC	0.001MF	10%	50V	
		<CONNECTOR>				
DS6	1-691-182-11	CONNECTOR (BOARD TO BOARD) 12P				
		<IC>				
IC1711	8-759-111-69	IC UPC1037HA				
IC1712	8-759-602-19	IC M5220L				
IC1713	8-759-111-69	IC UPC1037HA				
		<RESISTOR>				
R1840	1-215-445-00	METAL	10K	1%	1/4W	
R1841	1-215-433-00	METAL	3.3K	1%	1/4W	
R1842	1-215-465-00	METAL	68K	1%	1/4W	
R1843	1-215-421-00	METAL	1K	1%	1/4W	
R1844	1-215-455-00	METAL	27K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1845	1-215-455-00	METAL	27K	1%	1/4W	
R1846	1-215-421-00	METAL	1K	1%	1/4W	
R1850	1-215-461-00	METAL	47K	1%	1/4W	
R1851	1-215-461-00	METAL	47K	1%	1/4W	
R1852	1-215-429-00	METAL	2.2K	1%	1/4W	
R1853	1-215-397-00	METAL	100	1%	1/4W	
R1854	1-215-429-00	METAL	2.2K	1%	1/4W	
R1855	1-215-397-00	METAL	100	1%	1/4W	
R1940	1-215-445-00	METAL	10K	1%	1/4W	
R1941	1-215-433-00	METAL	3.3K	1%	1/4W	
R1942	1-215-421-00	METAL	1K	1%	1/4W	
R1943	1-215-465-00	METAL	68K	1%	1/4W	
R1944	1-215-421-00	METAL	1K	1%	1/4W	
R1945	1-215-455-00	METAL	27K	1%	1/4W	
R1946	1-215-455-00	METAL	27K	1%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV983	1-241-630-11	RES, ADJ, CARBON 10K	
RV984	1-241-630-11	RES, ADJ, CARBON 10K	

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*A-1341-579-A D BOARD, COMPLETE
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PART NO.	DESCRIPTION
*4-341-751-01	EYELET (EY1~EY10)
4-382-854-11	SCREW (M3X10), P, SW (+)
*4-395-527-01	HOLDER (B), TR

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C901	1-126-320-11	ELECT	10MF	20%	16V	
C902	1-124-477-11	ELECT	47MF	20%	16V	
C903	1-130-471-00	MYLAR	0.001MF	5%	50V	
C904	1-130-471-00	MYLAR	0.001MF	5%	50V	
C905	1-124-477-11	ELECT	47MF	20%	16V	
C906	1-126-233-11	ELECT	22MF	20%	50V	
C907	1-126-101-11	ELECT	100MF	20%	16V	
C908	1-124-907-11	ELECT	10MF	20%	50V	
C910	1-130-483-00	MYLAR	0.01MF	5%	50V	
C911	1-131-341-00	TANTALUM	0.1MF	20%	16V	
C912	1-124-903-11	ELECT	1MF	20%	50V	
C913	1-126-803-11	ELECT	47MF	20%	16V	
C914	1-126-233-11	ELECT	22MF	20%	50V	
C915	1-124-927-11	ELECT	4.7MF	20%	50V	
C916	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C917	1-130-471-00	MYLAR	0.001MF	5%	50V	
C918	1-102-963-00	CERAMIC	33PF	5%	50V	
C919	1-102-963-00	CERAMIC	33PF	5%	50V	
C920	1-102-963-00	CERAMIC	33PF	5%	50V	
C921	1-102-963-00	CERAMIC	33PF	5%	50V	
C922	1-102-963-00	CERAMIC	33PF	5%	50V	
C923	1-102-963-00	CERAMIC	33PF	5%	50V	
C931	1-102-973-00	CERAMIC	100PF	5%	50V	
C932	1-124-903-11	ELECT	1MF	20%	50V	
C933	1-124-234-00	ELECT	22MF	20%	16V	
C934	1-126-233-11	ELECT	22MF	20%	25V	
C935	1-126-233-11	ELECT	22MF	20%	25V	
C936	1-126-233-11	ELECT	22MF	20%	25V	
C937	1-126-233-11	ELECT	22MF	20%	25V	
C938	1-126-233-11	ELECT	22MF	20%	25V	
C939	1-126-233-11	ELECT	22MF	20%	25V	
C940	1-126-233-11	ELECT	22MF	20%	25V	
C1701	1-124-907-11	ELECT	10MF	20%	50V	
C1702	1-124-907-11	ELECT	10MF	20%	50V	
C1703	1-124-907-11	ELECT	10MF	20%	50V	
C1704	1-123-875-11	ELECT	10MF	20%	50V	
C1705	1-102-963-00	CERAMIC	33PF	5%	50V	
C1706	1-102-963-00	CERAMIC	33PF	5%	50V	
C1707	1-102-963-00	CERAMIC	33PF	5%	50V	
C1708	1-102-963-00	CERAMIC	33PF	5%	50V	
C1709	1-102-963-00	CERAMIC	33PF	5%	50V	
C1710	1-102-963-00	CERAMIC	33PF	5%	50V	
C1711	1-126-233-11	ELECT	22MF	20%	50V	
C1712	1-126-233-11	ELECT	22MF	20%	25V	
C1713	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1714	1-124-478-11	ELECT	100MF	20%	25V	
C1715	1-124-478-11	ELECT	100MF	20%	25V	
C1716	1-126-803-11	ELECT	47MF	20%	25V	
C1717	1-126-803-11	ELECT	47MF	20%	25V	
C1718	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1719	1-124-234-00	ELECT	22MF	20%	16V	
C1720	1-130-491-00	MYLAR	0.047MF	5%	50V	
C1721	1-130-491-00	MYLAR	0.047MF	5%	50V	
C1722	1-130-491-00	MYLAR	0.047MF	5%	50V	
C1724	1-126-233-11	ELECT	22MF	20%	25V	
C1725	1-102-963-00	CERAMIC	33PF	5%	50V	
C1726	1-124-122-11	ELECT	100MF	20%	35V	
C1727	1-102-963-00	CERAMIC	33PF	5%	50V	
C1728	1-102-963-00	CERAMIC	33PF	5%	50V	
C1729	1-106-367-00	MYLAR	0.01MF	10%	200V	
C1730	1-102-963-00	CERAMIC	33PF	5%	50V	
C1731	1-124-122-11	ELECT	100MF	20%	35V	
C1732	1-106-367-00	MYLAR	0.01MF	10%	200V	
C1733	1-102-963-00	CERAMIC	33PF	5%	50V	
C1734	1-102-963-00	CERAMIC	33PF	5%	50V	
C1735	1-124-122-11	ELECT	100MF	20%	35V	
C1736	1-106-367-00	MYLAR	0.01MF	10%	200V	
C1737	1-124-937-91	ELECT	10MF	20%	16V	
C1738	1-124-122-11	ELECT	100MF	20%	35V	
C1739	1-136-153-00	FILM	0.01MF	5%	50V	
C1740	1-124-122-11	ELECT	100MF	20%	35V	
C1741	1-124-122-11	ELECT	100MF	20%	35V	
C1742	1-126-104-11	ELECT	470MF	20%	35V	
C1744	1-124-478-11	ELECT	100MF	20%	25V	
C1745	1-126-375-11	ELECT	100MF	20%	25V	
C1763	1-126-096-11	ELECT	10MF	20%	25V	
C1764	1-124-477-11	ELECT	47MF	20%	16V	
C1765	1-124-477-11	ELECT	47MF	20%	16V	
C1766	1-126-101-11	ELECT	100MF	20%	16V	
C1769	1-126-157-11	ELECT	10MF	20%	16V	
C1770	1-130-495-00	MYLAR	0.1MF	5%	50V	
C1771	1-126-096-11	ELECT	10MF	20%	25V	
C1772	1-126-096-11	ELECT	10MF	20%	25V	
C1861	1-102-074-00	CERAMIC	0.001MF	10%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1	*1-564-510-11	PLUG, CONNECTOR 7P	
D2	*1-564-511-11	PLUG, CONNECTOR 8P	
D3	*1-564-512-11	PLUG, CONNECTOR 9P	
D4	*1-564-508-11	PLUG, CONNECTOR 5P	
D5	*1-564-511-11	PLUG, CONNECTOR 8P	
D6	1-691-169-11	PIN, CONNECTOR 12P	
D7	*1-564-507-11	PLUG, CONNECTOR 4P	
D8	*1-564-506-11	PLUG, CONNECTOR 3P	
D9	*1-564-507-11	PLUG, CONNECTOR 4P	
D14	*1-564-513-11	PLUG, CONNECTOR 10P	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D901	8-719-911-19	DIODE 1SS119	
D902	8-719-911-19	DIODE 1SS119	
D1701	8-719-900-95	DIODE V09G	
D1702	8-719-911-19	DIODE 1SS119	
D1703	8-719-900-95	DIODE V09G	
D1704	8-719-900-95	DIODE V09G	
D1705	8-719-900-95	DIODE V09G	
D1706	8-719-900-95	DIODE V09G	
D1707	8-719-911-19	DIODE 1SS119	
D1708	8-719-911-19	DIODE 1SS119	
D1709	8-719-911-19	DIODE 1SS119	
D1710	8-719-911-19	DIODE 1SS119	
D1711	8-719-911-19	DIODE 1SS119	
D1712	8-719-911-19	DIODE 1SS119	
D1713	8-719-911-19	DIODE 1SS119	
D1714	8-719-911-19	DIODE 1SS119	
D1715	8-719-911-19	DIODE 1SS119	
D1716	8-719-911-19	DIODE 1SS119	
D1717	8-719-911-19	DIODE 1SS119	
D1718	8-719-911-19	DIODE 1SS119	
D1720	8-719-109-50	DIODE RD2.0ES-B1	
D1721	8-719-109-50	DIODE RD2.0ES-B1	
D1722	8-719-109-50	DIODE RD2.0ES-B1	
D1723	8-719-109-50	DIODE RD2.0ES-B1	

<FUSE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
F901 ⚠	1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V	
	1-533-223-11	CLIP, FUSE; F901	
F902 ⚠	1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V	
	1-533-223-11	CLIP, FUSE; F902	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC901	8-759-145-58	IC UPC4558C	
IC902	8-752-033-68	IC CXA1268P	
IC903	8-759-701-56	IC NJM78M05FA	
IC904	8-759-701-65	IC NJM79M05FA	
IC905	8-759-701-89	IC NJM7915FA	
IC906	8-759-148-84	IC UPC2415HF	
IC907	8-759-140-53	IC UPD4053BC	
IC908	8-759-145-58	IC UPC4558C	
IC910	8-759-054-40	IC PA0036	
IC1701	8-759-602-19	IC M5220L	
IC1702	8-759-602-19	IC M5220L	
IC1703	8-759-602-19	IC M5220L	
IC1704	8-749-923-16	IC STK4278-L	
IC1705	8-749-923-16	IC STK4278-L	
IC1706	8-759-113-13	IC UPC1498H	
IC1707	8-759-113-13	IC UPC1498H	
IC1708	8-759-113-13	IC UPC1498H	
IC1709	8-759-145-58	IC UPC4558C	
IC1710	8-759-145-58	IC UPC4558C	
IC1714	8-759-145-58	IC UPC4558C	
IC1715	8-759-145-58	IC UPC4558C	
IC1718	8-759-145-58	IC UPC4558C	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L901	1-459-313-00	COIL WITH CORE (HWC)	
L902	1-459-313-00	COIL WITH CORE (HWC)	
L903	1-459-313-00	COIL WITH CORE (HWC)	
L904	1-459-313-00	COIL WITH CORE (HWC)	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q902	8-729-900-89	TRANSISTOR DTC144ES	
Q906	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q907	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q908	8-729-900-89	TRANSISTOR DTC144ES	
Q909	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q910	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q911	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q912	8-729-119-76	TRANSISTOR 2SA1175-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R901	1-215-463-00	METAL	56K	1%	1/4W	
R902	1-215-463-00	METAL	56K	1%	1/4W	
R903	1-215-449-00	METAL	15K	1%	1/4W	
R904	1-215-455-00	METAL	27K	1%	1/4W	
R905	1-215-449-00	METAL	15K	1%	1/4W	
R906	1-215-469-00	METAL	100K	1%	1/4W	
R907	1-215-469-00	METAL	100K	1%	1/4W	
R908	1-215-469-00	METAL	100K	1%	1/4W	
R909	1-215-473-00	METAL	150K	1%	1/4W	
R910	1-215-437-00	METAL	4.7K	1%	1/4W	
R911	1-215-453-00	METAL	22K	1%	1/4W	
R912	1-215-453-00	METAL	22K	1%	1/4W	
R913	1-215-437-00	METAL	4.7K	1%	1/4W	
R914	1-215-453-00	METAL	22K	1%	1/4W	
R915	1-215-423-00	METAL	1.2K	1%	1/4W	
R916	1-215-453-00	METAL	22K	1%	1/4W	
R919	1-215-399-00	METAL	120	1%	1/4W	
R920	1-215-399-00	METAL	120	1%	1/4W	
R921	1-215-399-00	METAL	120	1%	1/4W	
R922	1-215-399-00	METAL	120	1%	1/4W	
R923	1-215-451-00	METAL	18K	1%	1/4W	
R924	1-215-433-00	METAL	3.3K	1%	1/4W	
R925	1-215-433-00	METAL	3.3K	1%	1/4W	
R926	1-215-463-00	METAL	56K	1%	1/4W	
R927	1-215-463-00	METAL	56K	1%	1/4W	
R928	1-215-469-00	METAL	100K	1%	1/4W	
R929	1-215-433-00	METAL	3.3K	1%	1/4W	
R930	1-215-433-00	METAL	3.3K	1%	1/4W	
R931	1-215-433-00	METAL	3.3K	1%	1/4W	
R932	1-215-433-00	METAL	3.3K	1%	1/4W	
R933	1-215-433-00	METAL	3.3K	1%	1/4W	
R934	1-215-433-00	METAL	3.3K	1%	1/4W	
R935	1-215-439-00	METAL	5.6K	1%	1/4W	
R936	1-215-439-00	METAL	5.6K	1%	1/4W	
R937	1-215-439-00	METAL	5.6K	1%	1/4W	
R938	1-215-417-00	METAL	680	1%	1/4W	
R939	1-215-433-00	METAL	3.3K	1%	1/4W	
R940	1-215-429-00	METAL	2.2K	1%	1/4W	
R941	1-215-441-00	METAL	6.8K	1%	1/4W	
R942	1-215-451-00	METAL	18K	1%	1/4W	
R943	1-215-441-00	METAL	6.8K	1%	1/4W	
R944	1-215-445-00	METAL	10K	1%	1/4W	
R945	1-215-445-00	METAL	10K	1%	1/4W	
R946	1-215-445-00	METAL	10K	1%	1/4W	
R947	1-215-439-00	METAL	5.6K	1%	1/4W	
R948	1-215-455-00	METAL	27K	1%	1/4W	
R949	1-215-439-00	METAL	5.6K	1%	1/4W	
R950	1-215-429-00	METAL	2.2K	1%	1/4W	
R951	1-215-429-00	METAL	2.2K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R952	1-215-429-00	METAL	2.2K	1%	1/4W	
R953	1-215-439-00	METAL	5.6K	1%	1/4W	
R954	1-215-439-00	METAL	5.6K	1%	1/4W	
R955	1-215-435-00	METAL	3.9K	1%	1/4W	
R956	1-215-437-00	METAL	4.7K	1%	1/4W	
R957	1-215-441-00	METAL	6.8K	1%	1/4W	
R958	1-215-437-00	METAL	4.7K	1%	1/4W	
R959	1-215-439-00	METAL	5.6K	1%	1/4W	
R960	1-215-439-00	METAL	5.6K	1%	1/4W	
R961	1-215-439-00	METAL	5.6K	1%	1/4W	
R962	1-215-441-00	METAL	6.8K	1%	1/4W	
R963	1-215-441-00	METAL	6.8K	1%	1/4W	
R964	1-215-441-00	METAL	6.8K	1%	1/4W	
R965	1-215-909-11	METAL OXIDE	47	5%	3W	F
R966	1-215-469-00	METAL	100K	1%	1/4W	
R967	1-215-421-00	METAL	1K	1%	1/4W	
R968	1-215-437-00	METAL	4.7K	1%	1/4W	
R969	1-249-421-11	CARBON	2.2K	5%	1/4W	
R970	1-215-909-11	METAL OXIDE	47	5%	3W	F
R971	1-249-421-11	CARBON	2.2K	5%	1/4W	
R972	1-249-431-11	CARBON	15K	5%	1/4W	
R973	1-249-431-11	CARBON	15K	5%	1/4W	
R974	1-215-399-00	METAL	120	1%	1/4W	
R975	1-215-399-00	METAL	120	1%	1/4W	
R976	1-215-399-00	METAL	120	1%	1/4W	
R977	1-215-399-00	METAL	120	1%	1/4W	
R978	1-215-399-00	METAL	120	1%	1/4W	
R979	1-215-399-00	METAL	120	1%	1/4W	
R980	1-215-399-00	METAL	120	1%	1/4W	
R981	1-215-399-00	METAL	120	1%	1/4W	
R982	1-249-431-11	CARBON	15K	5%	1/4W	
R983	1-249-431-11	CARBON	15K	5%	1/4W	
R984	1-214-804-51	METAL	3.3	1%	1/2W	
R985	1-214-804-51	METAL	3.3	1%	1/2W	
R986	1-214-804-51	METAL	3.3	1%	1/2W	
R987	1-215-421-00	METAL	1K	1%	1/4W	
R988	1-215-421-00	METAL	1K	1%	1/4W	
R989	1-215-421-00	METAL	1K	1%	1/4W	
R990	1-215-421-00	METAL	1K	1%	1/4W	
R991	1-215-421-00	METAL	1K	1%	1/4W	
R992	1-215-421-00	METAL	1K	1%	1/4W	
R993	1-249-429-11	CARBON	10K	5%	1/4W	
R994	1-249-429-11	CARBON	10K	5%	1/4W	
R995	1-215-457-00	METAL	33K	1%	1/4W	
R996	1-215-473-00	METAL	150K	1%	1/4W	
R999	1-215-455-00	METAL	27K	1%	1/4W	
R1701	1-249-411-11	CARBON	330	5%	1/4W	
R1702	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1703	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1704	1-249-411-11	CARBON	330	5%	1/4W	
R1705	1-249-411-11	CARBON	330	5%	1/4W	
R1706	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1707	1-249-411-11	CARBON	330	5%	1/4W	
R1708	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1709	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1710	1-249-411-11	CARBON	330	5%	1/4W	
R1711	1-249-411-11	CARBON	330	5%	1/4W	
R1712	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1713	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1714	1-249-411-11	CARBON	330	5%	1/4W	
R1715	1-249-411-11	CARBON	330	5%	1/4W	
R1716	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1717	1-249-411-11	CARBON	330	5%	1/4W	
R1718	1-249-417-11	CARBON	1K	5%	1/4W	
R1719	1-214-792-00	METAL	1	1%	1/2W	
R1720	1-249-411-11	CARBON	330	5%	1/4W	
R1721	1-249-417-11	CARBON	1K	5%	1/4W	
R1722	1-249-411-11	CARBON	330	5%	1/4W	
R1723	1-249-417-11	CARBON	1K	5%	1/4W	
R1724	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1725	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1726	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1727	1-214-792-00	METAL	1	1%	1/2W	
R1728	1-214-792-00	METAL	1	1%	1/2W	
R1729	1-214-792-00	METAL	1	1%	1/2W	
R1730	1-249-405-11	CARBON	100	5%	1/4W	
R1731	1-249-417-11	CARBON	1K	5%	1/4W	
R1732	1-249-405-11	CARBON	100	5%	1/4W	
R1733	1-249-405-11	CARBON	100	5%	1/4W	
R1734	1-249-405-11	CARBON	100	5%	1/4W	
R1735	1-249-405-11	CARBON	100	5%	1/4W	
R1736	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1737	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1738	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1739	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1740	1-249-417-11	CARBON	1K	5%	1/4W	
R1741	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1742	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1743	1-249-417-11	CARBON	1K	5%	1/4W	
R1744	1-249-411-11	CARBON	330	5%	1/4W	
R1745	1-249-405-11	CARBON	100	5%	1/4W	
R1746	1-214-792-00	METAL	1	1%	1/2W	
R1747	1-215-886-11	METAL OXIDE	100	5%	2W	F
R1748	1-215-421-00	METAL	1K	1%	1/4W	
R1749	1-215-421-00	METAL	1K	1%	1/4W	
R1750	1-215-421-00	METAL	1K	1%	1/4W	
R1751	1-215-421-00	METAL	1K	1%	1/4W	
R1752	1-215-421-00	METAL	1K	1%	1/4W	
R1753	1-215-421-00	METAL	1K	1%	1/4W	
R1754	1-214-792-00	METAL	1	1%	1/2W	
R1755	1-215-469-00	METAL	100K	1%	1/4W	
R1756	1-215-437-00	METAL	4.7K	1%	1/4W	
R1757	1-215-437-00	METAL	4.7K	1%	1/4W	
R1758	1-215-437-00	METAL	4.7K	1%	1/4W	
R1759	1-249-405-11	CARBON	100	5%	1/4W	
R1760	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1761	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1762	1-215-445-00	METAL	10K	1%	1/4W	
R1763	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1764	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1765	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1766	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1767	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1768	1-249-439-11	CARBON	68K	5%	1/4W	
R1769	1-215-445-00	METAL	10K	1%	1/4W	
R1770	1-249-405-11	CARBON	100	5%	1/4W	
R1771	1-249-405-11	CARBON	100	5%	1/4W	
R1772	1-215-429-00	METAL	2.2K	1%	1/4W	
R1773	1-215-429-00	METAL	2.2K	1%	1/4W	
R1774	1-215-421-00	METAL	1K	1%	1/4W	
R1775	1-249-429-11	CARBON	10K	5%	1/4W	
R1776	1-215-421-00	METAL	1K	1%	1/4W	
R1777	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1778	1-215-421-00	METAL	1K	1%	1/4W	
R1779	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R1780	1-214-804-51	METAL	3.3	1%	1/2W	
R1781	1-214-804-51	METAL	3.3	1%	1/2W	
R1782	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R1783	1-214-804-51	METAL	3.3	1%	1/2W	
R1784	1-214-804-51	METAL	3.3	1%	1/2W	
R1785	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R1786	1-214-804-51	METAL	3.3	1%	1/2W	
R1787	1-214-804-51	METAL	3.3	1%	1/2W	
R1788	1-249-433-11	CARBON	22K	5%	1/4W	
R1789	1-249-441-11	CARBON	100K	5%	1/4W	
R1790	1-249-433-11	CARBON	22K	5%	1/4W	
R1791	1-249-429-11	CARBON	10K	5%	1/4W	
R1792	1-215-445-00	METAL	10K	1%	1/4W	
R1793	1-249-405-11	CARBON	100	5%	1/4W	
R1794	1-215-429-00	METAL	2.2K	1%	1/4W	
R1795	1-249-433-11	CARBON	22K	5%	1/4W	
R1796	1-249-405-11	CARBON	100	5%	1/4W	
R1797	1-249-429-11	CARBON	10K	5%	1/4W	
R1798	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1800	1-249-405-11	CARBON	100	5%	1/4W	
R1801	1-215-439-00	METAL	5.6K	1%	1/4W	
R1802	1-215-439-00	METAL	5.6K	1%	1/4W	
R1803	1-215-439-00	METAL	5.6K	1%	1/4W	
R1805	1-215-439-00	METAL	5.6K	1%	1/4W	
R1806	1-249-405-11	CARBON	100	5%	1/4W	
R1807	1-249-405-11	CARBON	100	5%	1/4W	
R1808	1-214-792-00	METAL	1	1%	1/2W	
R1809	1-214-792-00	METAL	1	1%	1/2W	
R1810	1-214-792-00	METAL	1	1%	1/2W	
R1811	1-214-792-00	METAL	1	1%	1/2W	
R1812	1-214-792-00	METAL	1	1%	1/2W	
R1813	1-214-792-00	METAL	1	1%	1/2W	
R1814	1-249-431-11	CARBON	15K	5%	1/4W	
R1815	1-247-885-00	CARBON	180K	5%	1/4W	
R1816	1-249-431-11	CARBON	15K	5%	1/4W	
R1817	1-247-885-00	CARBON	180K	5%	1/4W	
R1818	1-249-405-11	CARBON	100	5%	1/4W	
R1819	1-215-437-00	METAL	4.7K	1%	1/4W	
R1820	1-215-437-00	METAL	4.7K	1%	1/4W	
R1821	1-215-437-00	METAL	4.7K	1%	1/4W	
R1822	1-215-445-00	METAL	10K	1%	1/4W	
R1823	1-215-445-00	METAL	10K	1%	1/4W	
R1824	1-215-433-00	METAL	3.3K	1%	1/4W	
R1825	1-215-433-00	METAL	3.3K	1%	1/4W	
R1826	1-215-433-00	METAL	3.3K	1%	1/4W	
R1827	1-215-445-00	METAL	10K	1%	1/4W	
R1828	1-215-445-00	METAL	10K	1%	1/4W	
R1829	1-249-434-11	CARBON	27K	5%	1/4W	
R1830	1-249-434-11	CARBON	27K	5%	1/4W	
R1831	1-249-405-11	CARBON	100	5%	1/4W	
R1832	1-215-471-00	METAL	120K	1%	1/4W	
R1833	1-215-471-00	METAL	120K	1%	1/4W	
R1834	1-215-471-00	METAL	120K	1%	1/4W	
R1835	1-215-437-00	METAL	4.7K	1%	1/4W	
R1836	1-215-437-00	METAL	4.7K	1%	1/4W	
R1837	1-215-421-00	METAL	1K	1%	1/4W	
R1838	1-249-431-11	CARBON	15K	5%	1/4W	
R1839	1-249-431-11	CARBON	15K	5%	1/4W	
R1858	1-215-445-00	METAL	10K	1%	1/4W	
R1859	1-215-445-00	METAL	10K	1%	1/4W	
R1860	1-215-397-00	METAL	100	1%	1/4W	
R1861	1-215-453-00	METAL	22K	1%	1/4W	
R1862	1-215-453-00	METAL	22K	1%	1/4W	
R1863	1-215-397-00	METAL	100	1%	1/4W	
R1864	1-215-437-00	METAL	4.7K	1%	1/4W	
R1865	1-215-453-00	METAL	22K	1%	1/4W	
R1866	1-215-453-00	METAL	22K	1%	1/4W	
R1867	1-215-437-00	METAL	4.7K	1%	1/4W	
R1868	1-215-449-00	METAL	15K	1%	1/4W	
R1869	1-215-445-00	METAL	10K	1%	1/4W	
R1870	1-215-445-00	METAL	10K	1%	1/4W	
R1871	1-215-445-00	METAL	10K	1%	1/4W	
R1872	1-215-437-00	METAL	4.7K	1%	1/4W	
R1873	1-215-437-00	METAL	4.7K	1%	1/4W	
R1874	1-215-437-00	METAL	4.7K	1%	1/4W	
R1875	1-215-437-00	METAL	4.7K	1%	1/4W	
R1876	1-215-437-00	METAL	4.7K	1%	1/4W	
R1877	1-215-437-00	METAL	4.7K	1%	1/4W	
R1878	1-215-475-00	METAL	180K	1%	1/4W	
R1879	1-215-475-00	METAL	180K	1%	1/4W	
R1880	1-215-475-00	METAL	180K	1%	1/4W	
R1881	1-215-461-00	METAL	47K	1%	1/4W	
R1882	1-215-445-00	METAL	10K	1%	1/4W	
R1883	1-215-453-00	METAL	22K	1%	1/4W	
R1884	1-215-397-00	METAL	100	1%	1/4W	
R1885	1-215-445-00	METAL	10K	1%	1/4W	
R1886	1-215-445-00	METAL	10K	1%	1/4W	
R1887	1-215-397-00	METAL	100	1%	1/4W	
R1888	1-215-461-00	METAL	47K	1%	1/4W	
R1889	1-215-457-00	METAL	33K	1%	1/4W	
R1890	1-215-457-00	METAL	33K	1%	1/4W	
R1892	1-215-445-00	METAL	10K	1%	1/4W	
R1894	1-215-429-00	METAL	2.2K	1%	1/4W	
R1895	1-215-445-00	METAL	10K	1%	1/4W	
R1896	1-215-445-00	METAL	10K	1%	1/4W	
R1897	1-215-449-00	METAL	15K	1%	1/4W	
R1898	1-215-445-00	METAL	10K	1%	1/4W	
R1899	1-215-421-00	METAL	1K	1%	1/4W	
R1900	1-215-429-00	METAL	2.2K	1%	1/4W	
R1901	1-215-449-00	METAL	15K	1%	1/4W	
R1902	1-215-445-00	METAL	10K	1%	1/4W	
R1903	1-215-445-00	METAL	10K	1%	1/4W	
R1904	1-215-445-00	METAL	10K	1%	1/4W	
R1905	1-215-445-00	METAL	10K	1%	1/4W	
R1906	1-215-429-00	METAL	2.2K	1%	1/4W	
R1907	1-215-445-00	METAL	10K	1%	1/4W	
R1908	1-215-445-00	METAL	10K	1%	1/4W	
R1909	1-215-445-00	METAL	10K	1%	1/4W	
R1910	1-215-445-00	METAL	10K	1%	1/4W	
R1911	1-215-453-00	METAL	22K	1%	1/4W	
R1916	1-215-423-00	METAL	1.2K	1%	1/4W	
R1920	1-215-453-00	METAL	22K	1%	1/4W	
R1921	1-215-445-00	METAL	10K	1%	1/4W	
R1922	1-215-445-00	METAL	10K	1%	1/4W	
R1924	1-215-429-00	METAL	2.2K	1%	1/4W	
R1925	1-215-429-00	METAL	2.2K	1%	1/4W	
R1926	1-215-429-00	METAL	2.2K	1%	1/4W	
R1927	1-215-445-00	METAL	10K	1%	1/4W	
R1928	1-215-421-00	METAL	1K	1%	1/4W	
R1929	1-215-445-00	METAL	10K	1%	1/4W	
R1930	1-215-397-00	METAL	100	1%	1/4W	
R1931	1-215-397-00	METAL	100	1%	1/4W	
R1932	1-215-453-00	METAL	22K	1%	1/4W	
R1933	1-215-453-00	METAL	22K	1%	1/4W	
R1934	1-215-429-00	METAL	2.2K	1%	1/4W	
R1937	1-215-445-00	METAL	10K	1%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV901	1-241-631-11	RES, ADJ, CARBON 22K	
RV902	1-241-631-11	RES, ADJ, CARBON 22K	
RV903	1-241-631-11	RES, ADJ, CARBON 22K	
RV904	1-241-631-11	RES, ADJ, CARBON 22K	
RV905	1-241-631-11	RES, ADJ, CARBON 22K	
RV906	1-241-631-11	RES, ADJ, CARBON 22K	
RV907	1-241-631-11	RES, ADJ, CARBON 22K	
RV908	1-241-631-11	RES, ADJ, CARBON 22K	
RV909	1-241-631-11	RES, ADJ, CARBON 22K	
RV910	1-241-631-11	RES, ADJ, CARBON 22K	
RV911	1-241-627-11	RES, ADJ, CARBON 1K	
RV912	1-241-631-11	RES, ADJ, CARBON 22K	
RV913	1-238-023-11	RES, ADJ, CARBON 470K	
RV914	1-241-630-11	RES, ADJ, CARBON 10K	
RV915	1-241-630-11	RES, ADJ, CARBON 10K	
RV916	1-241-631-11	RES, ADJ, CARBON 22K	
RV917	1-241-631-11	RES, ADJ, CARBON 22K	
RV918	1-241-631-11	RES, ADJ, CARBON 22K	
RV919	1-241-631-11	RES, ADJ, CARBON 22K	
RV920	1-241-631-11	RES, ADJ, CARBON 22K	
RV921	1-241-631-11	RES, ADJ, CARBON 22K	
RV922	1-241-631-11	RES, ADJ, CARBON 22K	
RV923	1-241-631-11	RES, ADJ, CARBON 22K	
RV924	1-241-631-11	RES, ADJ, CARBON 22K	
RV925	1-241-631-11	RES, ADJ, CARBON 22K	
RV926	1-241-631-11	RES, ADJ, CARBON 22K	
RV927	1-241-631-11	RES, ADJ, CARBON 22K	
RV928	1-241-629-11	RES, ADJ, CARBON 4.7K	
RV929	1-241-631-11	RES, ADJ, CARBON 22K	
RV930	1-241-629-11	RES, ADJ, CARBON 4.7K	
RV931	1-241-631-11	RES, ADJ, CARBON 22K	
RV932	1-241-631-11	RES, ADJ, CARBON 22K	
RV933	1-241-631-11	RES, ADJ, CARBON 22K	
RV934	1-241-631-11	RES, ADJ, CARBON 22K	
RV935	1-241-631-11	RES, ADJ, CARBON 22K	
RV936	1-241-631-11	RES, ADJ, CARBON 22K	
RV937	1-241-630-11	RES, ADJ, CARBON 10K	
RV938	1-241-630-11	RES, ADJ, CARBON 10K	
RV939	1-241-630-11	RES, ADJ, CARBON 10K	
RV940	1-241-631-11	RES, ADJ, CARBON 22K	
RV941	1-241-631-11	RES, ADJ, CARBON 22K	
RV942	1-241-631-11	RES, ADJ, CARBON 22K	
RV943	1-241-631-11	RES, ADJ, CARBON 22K	
RV944	1-241-631-11	RES, ADJ, CARBON 22K	
RV945	1-241-631-11	RES, ADJ, CARBON 22K	
RV946	1-241-631-11	RES, ADJ, CARBON 22K	
RV947	1-241-631-11	RES, ADJ, CARBON 22K	
RV948	1-241-631-11	RES, ADJ, CARBON 22K	
RV949	1-241-631-11	RES, ADJ, CARBON 22K	
RV950	1-241-631-11	RES, ADJ, CARBON 22K	
RV951	1-241-631-11	RES, ADJ, CARBON 22K	
RV952	1-241-631-11	RES, ADJ, CARBON 22K	
RV953	1-241-631-11	RES, ADJ, CARBON 22K	
RV954	1-241-631-11	RES, ADJ, CARBON 22K	
RV956	1-241-631-11	RES, ADJ, CARBON 22K	
RV957	1-241-631-11	RES, ADJ, CARBON 22K	
RV958	1-241-631-11	RES, ADJ, CARBON 22K	
RV959	1-241-631-11	RES, ADJ, CARBON 22K	
RV960	1-241-630-11	RES, ADJ, CARBON 10K	
RV961	1-241-631-11	RES, ADJ, CARBON 22K	
RV962	1-241-631-11	RES, ADJ, CARBON 22K	
RV963	1-241-631-11	RES, ADJ, CARBON 22K	
RV964	1-241-631-11	RES, ADJ, CARBON 22K	
RV965	1-241-631-11	RES, ADJ, CARBON 22K	
RV966	1-241-631-11	RES, ADJ, CARBON 22K	
RV967	1-241-631-11	RES, ADJ, CARBON 22K	
RV968	1-241-631-11	RES, ADJ, CARBON 22K	
RV969	1-241-631-11	RES, ADJ, CARBON 22K	
RV970	1-241-631-11	RES, ADJ, CARBON 22K	
RV971	1-241-631-11	RES, ADJ, CARBON 22K	
RV972	1-241-631-11	RES, ADJ, CARBON 22K	
RV973	1-241-631-11	RES, ADJ, CARBON 22K	
RV974	1-241-631-11	RES, ADJ, CARBON 22K	
RV975	1-241-631-11	RES, ADJ, CARBON 22K	
RV976	1-241-631-11	RES, ADJ, CARBON 22K	
RV977	1-241-631-11	RES, ADJ, CARBON 22K	
RV978	1-241-631-11	RES, ADJ, CARBON 22K	
RV979	1-241-631-11	RES, ADJ, CARBON 22K	
RV980	1-241-632-11	RES, ADJ, CARBON 47K	
RV981	1-241-631-11	RES, ADJ, CARBON 22K	
RV982	1-241-631-11	RES, ADJ, CARBON 22K	

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*A-1342-193-A VM BOARD, COMPLETE
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*4-395-527-01 HOLDER (B), TR

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1501	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C1502	1-126-101-11	ELECT	100MF	20%	16V	
C1504	1-108-700-11	MYLAR	0.047MF	10%	200V	
C1505	1-124-907-11	ELECT	10MF	20%	50V	
C1506	1-108-688-11	MYLAR	0.0047MF	10%	200V	
C1507	1-106-367-00	MYLAR	0.01MF	10%	100V	
C1508	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1509	1-106-367-00	MYLAR	0.01MF	10%	100V	
C1510	1-126-355-11	ELECT	33MF	20%	160V	
C1511	1-124-799-11	ELECT	2.2MF	20%	160V	
C1512	1-108-704-11	MYLAR	0.1MF	10%	200V	
C1513	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1514	1-102-951-00	CERAMIC	15PF	5%	50V	
C1515	1-102-959-00	CERAMIC	22PF	5%	50V	
C1516	1-102-963-00	CERAMIC	33PF	5%	50V	
C1517	1-123-875-11	ELECT	10MF	20%	50V	
C1518	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1519	1-108-688-11	MYLAR	0.0047MF	10%	200V	
C1520	1-126-803-11	ELECT	47MF	20%	16V	
C1521	1-124-907-11	ELECT	10MF	20%	50V	
C1551	1-124-122-11	ELECT	100MF	20%	50V	
C1552	1-124-122-11	ELECT	100MF	20%	50V	
C1553	1-102-824-00	CERAMIC	470PF	5%	50V	
C1554	1-102-824-00	CERAMIC	470PF	5%	50V	
C1555	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1556	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1557	1-102-824-00	CERAMIC	470PF	5%	50V	
C1558	1-102-824-00	CERAMIC	470PF	5%	50V	
C1559	1-102-824-00	CERAMIC	470PF	5%	50V	
C1560	1-102-824-00	CERAMIC	470PF	5%	50V	
C1561	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1562	1-130-483-00	MYLAR	0.01MF	5%	50V	
C1563	1-130-483-00	MYLAR	0.01MF	5%	50V	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1501	8-719-911-19	DIODE 1SS119	
D1502	8-719-911-19	DIODE 1SS119	
D1503	8-719-911-19	DIODE 1SS119	
D1504	8-719-911-19	DIODE 1SS119	
D1505	8-719-911-19	DIODE 1SS119	
D1506	8-719-911-19	DIODE 1SS119	
D1507	8-719-982-36	DIODE MTZJ-39B	
D1508	8-719-982-36	DIODE MTZJ-39B	
D1509	8-719-911-19	DIODE 1SS119	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1551	8-759-145-58	IC UPC4558C	
IC1552	8-759-912-77	IC LM324N	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L1502	1-408-418-00	INDUCTOR	56UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1501	8-729-208-39	TRANSISTOR 2SA1306A-Y	
Q1502	8-729-208-72	TRANSISTOR 2SC3298B-Y	
Q1503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1505	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1507	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1508	8-729-142-86	TRANSISTOR 2SC3733	
Q1551	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1552	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q1553	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1554	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q1555	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1556	8-729-141-83	TRANSISTOR 2SB1094-LK	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1501	1-249-451-11	CARBON	2.2	5%	1/4W	F
R1502	1-249-414-11	CARBON	560	5%	1/4W	F
R1503	1-247-734-11	CARBON	39	5%	1/2W	F
R1504	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1505	1-249-405-11	CARBON	100	5%	1/4W	
R1506	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1507	1-249-412-11	CARBON	390	5%	1/4W	
R1508	1-249-436-11	CARBON	39K	5%	1/4W	
R1509	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1510	1-249-436-11	CARBON	39K	5%	1/4W	
R1511	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1512	1-249-441-11	CARBON	100K	5%	1/4W	
R1513	1-249-432-11	CARBON	18K	5%	1/4W	
R1514	1-249-405-11	CARBON	100	5%	1/4W	
R1515	1-249-435-11	CARBON	33K	5%	1/4W	
R1517	1-249-417-11	CARBON	1K	5%	1/4W	F
R1519	1-215-916-00	METAL OXIDE	680	5%	3W	F
R1520	1-249-432-11	CARBON	18K	5%	1/4W	
R1521	1-249-414-11	CARBON	560	5%	1/4W	
R1522	1-249-384-11	CARBON	1.8	5%	1/4W	F
R1523	1-249-400-11	CARBON	39	5%	1/4W	F
R1524	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1525	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1526	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1527	1-249-414-11	CARBON	560	5%	1/4W	
R1528	1-249-429-11	CARBON	10K	5%	1/4W	
R1529	1-249-414-11	CARBON	560	5%	1/4W	
R1530	1-216-451-11	METAL OXIDE	120	5%	2W	F
R1531	1-249-429-11	CARBON	10K	5%	1/4W	
R1532	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1533	1-247-903-00	CARBON	1M	5%	1/4W	
R1534	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1535	1-249-392-11	CARBON	8.2	5%	1/4W	F
R1551	1-215-445-00	METAL	10K	1%	1/4W	
R1552	1-215-423-00	METAL	1.2K	1%	1/4W	
R1553	1-249-417-11	CARBON	1K	5%	1/4W	
R1554	1-215-445-00	METAL	10K	1%	1/4W	
R1555	1-215-375-00	METAL	12	1%	1/4W	
R1556	1-215-375-00	METAL	12	1%	1/4W	
R1557	1-215-375-00	METAL	12	1%	1/4W	
R1558	1-215-445-00	METAL	10K	1%	1/4W	
R1559	1-215-445-00	METAL	10K	1%	1/4W	
R1560	1-215-445-00	METAL	10K	1%	1/4W	
R1561	1-215-423-00	METAL	1.2K	1%	1/4W	
R1562	1-215-423-00	METAL	1.2K	1%	1/4W	
R1563	1-215-445-00	METAL	10K	1%	1/4W	
R1564	1-249-417-11	CARBON	1K	5%	1/4W	
R1565	1-215-445-00	METAL	10K	1%	1/4W	
R1566	1-215-375-00	METAL	12	1%	1/4W	
R1567	1-215-375-00	METAL	12	1%	1/4W	
R1568	1-215-375-00	METAL	12	1%	1/4W	
R1569	1-215-445-00	METAL	10K	1%	1/4W	
R1570	1-215-445-00	METAL	10K	1%	1/4W	
R1571	1-249-417-11	CARBON	1K	5%	1/4W	
R1572	1-215-445-00	METAL	10K	1%	1/4W	
R1573	1-215-375-00	METAL	12	1%	1/4W	
R1574	1-215-375-00	METAL	12	1%	1/4W	
R1575	1-215-375-00	METAL	12	1%	1/4W	
R1576	1-215-445-00	METAL	10K	1%	1/4W	
R1577	1-215-445-00	METAL	10K	1%	1/4W	
R1578	1-249-417-11	CARBON	1K	5%	1/4W	
R1579	1-249-417-11	CARBON	1K	5%	1/4W	
R1580	1-249-417-11	CARBON	1K	5%	1/4W	
R1581	1-249-432-11	CARBON	18K	5%	1/4W	
R1582	1-249-432-11	CARBON	18K	5%	1/4W	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
V2	*1-564-518-11	PLUG, CONNECTOR 3P	
V22	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	

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*1-644-710-11 HI BOARD
****

4-033-777-01 HOLDER, LED
*4-374-987-01 GUIDE, LIGHT
*4-381-686-01 BRACKET (B), LIGHT GUIDE

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN0732	*1-564-522-11	PLUG, CONNECTOR 7P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D092	8-719-812-41	DIODE TLR124	
D093	8-719-812-41	DIODE TLR124	
D094	8-719-812-41	DIODE TLR124	

H1 H3 H2 J

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<IC>				
IC091	8-741-148-33	IC SBX1483-59				
		<RESISTOR>				
R091	1-249-413-11	CARBON	470	5%	1/4W	

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*1-644-712-11 H3 BOARD
****

	*4-341-752-01	EYELET (EY1~EY8)				
		<CONNECTOR>				
CN0959	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 2P				
CN0960	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 2P				
		<SWITCH>				
S095 ⚠	1-692-293-11	SWITCH, PUSH (AC POWER)(1 KEY)				

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*1-644-711-11 H2 BOARD
****

		<CAPACITOR>				
C083	1-101-005-00	CERAMIC	0.022MF		50V	
C084	1-101-005-00	CERAMIC	0.022MF		50V	
		<CONNECTOR>				
CN0808	*1-564-525-11	PLUG, CONNECTOR 10P				
CN0819	*1-568-878-51	PIN, CONNECTOR 3P				
CN0831	*1-564-519-11	PLUG, CONNECTOR 4P				
		<JACK>				
J081	1-565-931-11	TERMINAL BLOCK, S 3P				
J082	1-691-293-11	JACK				
		<COIL>				
L081	1-408-409-00	INDUCTOR	10UH			
L082	1-408-409-00	INDUCTOR	10UH			
		<RESISTOR>				
R082	1-249-429-11	CARBON	10K	5%	1/4W	
R083	1-249-425-11	CARBON	4.7K	5%	1/4W	
R084	1-249-421-11	CARBON	2.2K	5%	1/4W	
R085	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R086	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
		<SWITCH>				
S082	1-572-198-11	SWITCH, TACTIL				
S083	1-572-198-11	SWITCH, TACTIL				
S084	1-572-198-11	SWITCH, TACTIL				

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*A-1388-158-A J BOARD, COMPLETE
****

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<CAPACITOR>			
C281	1-124-442-00	ELECT	330MF	20%	6.3V
C291	1-101-005-00	CERAMIC	0.022MF		50V
C292	1-101-005-00	CERAMIC	0.022MF		50V
C295	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C296	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C901	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C902	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C904	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C905	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C906	1-101-004-00	CERAMIC	0.01MF		50V
C907	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C908	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C909	1-101-004-00	CERAMIC	0.01MF		50V
C910	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C911	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C912	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C913	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C914	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C915	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C916	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C917	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C918	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C919	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C920	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C921	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C922	1-124-477-11	ELECT	47MF	20%	16V
C923	1-164-346-11	CERAMIC CHIP	1MF		16V
C924	1-124-477-11	ELECT	47MF	20%	16V
C925	1-124-477-11	ELECT	47MF	20%	16V
C926	1-164-346-11	CERAMIC CHIP	1MF		16V
C927	1-124-477-11	ELECT	47MF	20%	16V
C928	1-124-477-11	ELECT	47MF	20%	16V
C929	1-124-477-11	ELECT	47MF	20%	16V
C930	1-124-477-11	ELECT	47MF	20%	16V
C931	1-164-346-11	CERAMIC CHIP	1MF		16V
C932	1-164-346-11	CERAMIC CHIP	1MF		16V
C933	1-124-477-11	ELECT	47MF	20%	16V
C934	1-124-477-11	ELECT	47MF	20%	16V
C935	1-124-477-11	ELECT	47MF	20%	16V
C936	1-164-346-11	CERAMIC CHIP	1MF		16V
C937	1-164-346-11	CERAMIC CHIP	1MF		16V
C938	1-124-477-11	ELECT	47MF	20%	16V
		<CONNECTOR>			
CN1209	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P			
CN1210	*1-564-522-11	PLUG, CONNECTOR 7P			
CN1233	*1-564-518-11	PLUG, CONNECTOR 3P			
CN1240	*1-564-518-11	PLUG, CONNECTOR 3P			
		<DIODE>			
D901	8-719-921-69	DIODE MTZJ-9.1			
D902	8-719-921-69	DIODE MTZJ-9.1			
D903	8-719-921-69	DIODE MTZJ-9.1			
D904	8-719-921-69	DIODE MTZJ-9.1			
D905	8-719-921-69	DIODE MTZJ-9.1			
D906	8-719-921-69	DIODE MTZJ-9.1			
D907	8-719-921-69	DIODE MTZJ-9.1			
D908	8-719-921-69	DIODE MTZJ-9.1			
D909	8-719-921-69	DIODE MTZJ-9.1			
D910	8-719-921-69	DIODE MTZJ-9.1			

J

REF.NO.	PART NO.	DESCRIPTION				REMARK
D911	8-719-921-69	DIODE MTZJ-9.1				
D912	8-719-921-69	DIODE MTZJ-9.1				
D913	8-719-921-69	DIODE MTZJ-9.1				
D914	8-719-921-69	DIODE MTZJ-9.1				
D915	8-719-921-69	DIODE MTZJ-9.1				
D916	8-719-921-69	DIODE MTZJ-9.1				
D917	8-719-921-69	DIODE MTZJ-9.1				
D918	8-719-921-69	DIODE MTZJ-9.1				
D919	8-719-921-69	DIODE MTZJ-9.1				
D920	8-719-921-69	DIODE MTZJ-9.1				
D921	8-719-921-69	DIODE MTZJ-9.1				
D922	8-719-921-69	DIODE MTZJ-9.1				
D923	8-719-921-69	DIODE MTZJ-9.1				
D924	8-719-921-69	DIODE MTZJ-9.1				
D925	8-719-921-69	DIODE MTZJ-9.1				
D926	8-719-921-69	DIODE MTZJ-9.1				
D927	8-719-921-69	DIODE MTZJ-9.1				
D928	8-719-921-69	DIODE MTZJ-9.1				
		<JACK>				
J291	1-536-996-21	TERMINAL BOARD, INPUT/OUTPUT				
J901	1-695-296-11	TERMINAL BLOCK, S				
J903	1-695-549-11	SOCKET 21P				
J904	1-695-296-11	TERMINAL BLOCK, S				
J905	1-695-549-21	SOCKET 21P				
J906	1-695-296-11	TERMINAL BLOCK, S				
J907	1-695-549-21	SOCKET 21P				
		<COIL>				
L291	1-402-711-11	INDUCTOR, WIDEBAND				
L292	1-402-711-11	INDUCTOR, WIDEBAND				
L294	1-402-711-11	INDUCTOR, WIDEBAND				
L295	1-402-711-11	INDUCTOR, WIDEBAND				
		<TRANSISTOR>				
Q281	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q282	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q283	8-729-216-22	TRANSISTOR 2SA1162-G				
		<RESISTOR>				
JR201	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR901	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR905	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR906	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR909	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR910	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR911	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR915	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR917	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR918	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR919	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR920	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR921	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR923	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR924	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR926	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR927	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR928	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR935	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR939	1-216-295-00	METAL GLAZE	0	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR940	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR942	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR944	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR946	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR947	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR952	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR954	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R283	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R284	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R286	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R287	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W	
R288	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W	
R289	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R291	1-249-413-11	CARBON	470	5%	1/4W	
R292	1-249-413-11	CARBON	470	5%	1/4W	
R901	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R902	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R903	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R904	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R905	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R906	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R907	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R908	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R909	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R910	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R911	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R913	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R914	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R915	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R916	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R917	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R919	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R920	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R921	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R922	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R923	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R924	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R925	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R926	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R927	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R928	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R929	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R930	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R931	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W	
R932	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R933	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R934	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R935	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R936	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R937	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R938	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R939	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R940	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R941	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R942	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R943	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R944	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R945	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R946	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R947	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R948	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R949	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R950	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R951	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R952	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R953	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R954	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R955	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R956	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R957	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R958	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R959	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R960	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R961	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R990	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R991	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R992	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R993	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R994	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R995	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R996	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R997	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R998	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R999	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION
	*A-1390-305-A	N BOARD, COMPLETE *****************
	*4-341-751-01	EYELET (EY11,EY12,EY15~EY18,EY24~EY37, EY40~EY54,EY57~EY59)
	*4-341-752-01	EYELET (EY1~EY10,EY13,EY14,EY19~EY23, EY38,EY39,EY55,EY56,EY60)
	*4-363-146-00	HEAT SINK, V.OUT
	4-382-854-11	SCREW (M3X10), P, SW (+)
	4-383-023-01	SPACER, MICA

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C801	1-125-489-00	ELECT(BLOCK)	560MF	20%	200V	
C802	1-123-024-21	ELECT	33MF		160V	
C803	1-136-729-11	FILM	1.5MF	5%	400V	
C804	1-108-700-11	MYLAR	0.047MF	10%	200V	
C805	1-102-030-00	CERAMIC	330PF	10%	500V	
C806	1-130-495-00	MYLAR	0.1MF	5%	50V	
C807	1-123-875-11	ELECT	10MF	20%	50V	
C808	1-126-183-11	ELECT	1000MF	20%	16V	
C809	1-124-903-11	ELECT	1MF	20%	50V	
C810	1-124-903-11	ELECT	1MF	20%	50V	
C811	1-124-902-00	ELECT	0.47MF	20%	50V	
C812	1-102-973-00	CERAMIC	100PF	5%	50V	
C813	1-102-244-00	CERAMIC	220PF	10%	500V	
C814	1-110-364-11	MYLAR	0.1MF	10%	200V	
C815	1-108-692-11	MYLAR	0.01MF	10%	200V	
C816	1-124-907-11	ELECT	10MF	20%	50V	
C817	1-124-119-00	ELECT	330MF	20%	16V	
C818	1-102-824-00	CERAMIC	470PF	5%	50V	
C819	1-124-907-11	ELECT	10MF	20%	50V	
C820	1-124-907-11	ELECT	10MF	20%	50V	
C821	1-124-907-11	ELECT	10MF	20%	50V	
C822	1-124-034-51	ELECT	33MF	20%	16V	
C823	1-124-907-11	ELECT	10MF	20%	50V	
C824	1-124-034-51	ELECT	33MF	20%	16V	
C825	1-124-034-51	ELECT	33MF	20%	16V	
C826	1-124-907-11	ELECT	10MF	20%	50V	
C827	1-124-907-11	ELECT	10MF	20%	50V	
C828	1-124-907-11	ELECT	10MF	20%	50V	
C829	1-124-034-51	ELECT	33MF	20%	16V	
C830	1-124-907-11	ELECT	10MF	20%	50V	

REF.NO.	PART NO.	DESCRIPTION				REMARK
C831	1-106-220-00	MYLAR	0.1MF	10%	100V	
C832	1-124-907-11	ELECT	10MF	20%	50V	
C833	1-126-233-11	ELECT	22MF	20%	50V	
C834	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C835	1-124-927-11	ELECT	4.7MF	20%	50V	
C836	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C837	1-136-169-00	FILM	0.22MF	5%	50V	
C838	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C839	1-102-106-00	CERAMIC	100PF	10%	50V	
C840	1-136-807-11	FILM	0.018MF	3%	1.6KV	
C841	1-136-729-11	FILM	1.5MF	5%	400V	
C842	1-130-471-00	MYLAR	0.001MF	5%	50V	
C843	1-136-173-00	FILM	0.47MF	5%	50V	
C844	1-110-364-11	MYLAR	0.1MF	10%	200V	
C850	1-136-169-00	FILM	0.22MF	5%	50V	
C851	1-124-907-11	ELECT	10MF	20%	50V	
C852	1-124-907-11	ELECT	10MF	20%	50V	
C853	1-106-220-00	MYLAR	0.1MF	10%	100V	
C854	1-126-329-11	ELECT	470MF	20%	50V	
C855	1-124-514-11	ELECT	100MF	20%	50V	
C856	1-162-114-00	CERAMIC	0.0047MF		2KV	
C858	1-124-119-00	ELECT	330MF	20%	16V	
C888	1-124-464-11	ELECT	0.22MF	20%	50V	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D801	8-719-928-08	DIODE ERD28-08S
D802	8-719-300-80	DIODE RU-1C
D803	8-719-921-43	DIODE MTZJ-5.1B
D804	8-719-911-19	DIODE 1SS119
D805	8-719-911-19	DIODE 1SS119
D806	8-719-921-43	DIODE MTZJ-5.1B
D807	8-719-921-43	DIODE MTZJ-5.1B
D808	8-719-911-19	DIODE 1SS119
D809	8-719-911-19	DIODE 1SS119
D810	8-719-911-19	DIODE 1SS119
D811	8-719-921-43	DIODE MTZJ-5.1B
D812	8-719-911-19	DIODE 1SS119
D813	8-719-911-19	DIODE 1SS119
D814	8-719-911-19	DIODE 1SS119
D815	8-719-921-88	DIODE MTZJ-13B
D817	8-719-945-80	DIODE ERC06-15S
D818	8-719-911-19	DIODE 1SS119
D820	8-719-911-19	DIODE 1SS119
D850	8-719-982-07	DIODE MTZJ-3.9A
D851	8-719-903-09	DIODE V30N
D852	8-719-911-19	DIODE 1SS119
D853	8-719-903-09	DIODE V30N

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC801	8-759-982-13	IC RC7812FA
IC802	8-759-103-93	IC UPC393C
IC803	8-759-990-82	IC TL082CP
IC804	8-759-103-93	IC UPC393C
IC805	8-759-100-75	IC UPC1394C

<COIL>

REF.NO.	PART NO.	DESCRIPTION
L801	1-459-862-11	COIL, CHOKE 90UH
L802	1-424-603-11	COIL, CHOKE 1.05MMH
L803	1-459-313-00	COIL WITH CORE (HWC)
L804	1-408-421-00	INDUCTOR 100UH
L805	1-424-603-11	COIL, CHOKE 1.05MMH

N

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
N2	*1-568-880-61	PIN, CONNECTOR 5P	
N3	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
N4	*1-568-879-51	PIN, CONNECTOR 4P	
N5	*1-568-880-51	PIN, CONNECTOR 5P	
N6	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
N7	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
N10	*1-564-511-11	PLUG, CONNECTOR 8P	
N21	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
N30	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
N851	*1-506-371-00	PIN, CONNECTOR 2P	
N853	*1-506-371-00	PIN, CONNECTOR 2P	

<NEON LAMP>

REF.NO.	PART NO.	DESCRIPTION
NL801	1-519-108-99	LAMP, NEON

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q801	8-729-201-62	TRANSISTOR 2SC2555-2
Q802	8-729-119-80	TRANSISTOR 2SC2688-LK
Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q805	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q806	8-729-119-80	TRANSISTOR 2SC2688-LK
Q807	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q808	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q809	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q811	8-729-805-07	TRANSISTOR 2SD1887-CA
Q812	8-729-804-48	TRANSISTOR 2SC3675
Q820	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q851	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q852	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q853	8-729-820-98	TRANSISTOR 2SC4256CB

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R801	1-216-378-11	METAL OXIDE	5.6	5%	2W	F
R802	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R803	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R804	1-249-429-11	CARBON	10K	5%	1/4W	
R805	1-249-423-11	CARBON	3.3K	5%	1/4W	
R806	1-249-425-11	CARBON	4.7K	5%	1/4W	
R807	1-249-441-11	CARBON	100K	5%	1/4W	
R808	1-249-417-11	CARBON	1K	5%	1/4W	
R809	1-249-417-11	CARBON	1K	5%	1/4W	
R810	1-249-441-11	CARBON	100K	5%	1/4W	
R811	1-249-421-11	CARBON	2.2K	5%	1/4W	
R812	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R813	1-215-921-11	METAL OXIDE	4.7K	5%	3W	F
R814	1-249-409-11	CARBON	220	5%	1/4W	
R815	1-249-415-11	CARBON	680	5%	1/4W	F
R816	1-214-777-00	METAL	100K	1%	1/4W	
R817	1-215-471-00	METAL	120K	1%	1/4W	
R818	1-215-471-00	METAL	120K	1%	1/4W	
R819	1-215-450-00	METAL	16K	1%	1/4W	
R820	1-215-451-00	METAL	18K	1%	1/4W	
R821	1-249-423-11	CARBON	3.3K	5%	1/4W	
R822	1-249-433-11	CARBON	22K	5%	1/4W	
R823	1-249-429-11	CARBON	10K	5%	1/4W	
R824	1-215-469-00	METAL	100K	1%	1/4W	
R825	1-215-453-00	METAL	22K	1%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R826	1-214-962-00	METAL	820K	1%	1/4W	
R827	1-214-764-00	METAL	30K	1%	1/4W	
R828	1-215-455-00	METAL	27K	1%	1/4W	
R829	1-215-455-00	METAL	27K	1%	1/4W	
R830	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R831	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R832	1-249-417-11	CARBON	1K	5%	1/4W	
R833	1-249-419-11	CARBON	1.5K	5%	1/4W	
R834	1-249-419-11	CARBON	1.5K	5%	1/4W	
R835	1-215-429-00	METAL	2.2K	1%	1/4W	
R836	1-215-435-00	METAL	3.9K	1%	1/4W	
R837	1-249-433-11	CARBON	22K	5%	1/4W	
R838	1-249-435-11	CARBON	33K	5%	1/4W	
R839	1-249-438-11	CARBON	56K	5%	1/4W	
R840	1-249-434-11	CARBON	27K	5%	1/4W	
R841	1-249-429-11	CARBON	10K	5%	1/4W	
R842	1-249-435-11	CARBON	33K	5%	1/4W	
R843	1-249-423-11	CARBON	3.3K	5%	1/4W	
R844	1-249-433-11	CARBON	22K	5%	1/4W	
R845	1-249-435-11	CARBON	33K	5%	1/4W	
R846	1-249-429-11	CARBON	10K	5%	1/4W	
R847	1-214-761-00	METAL	22K	1%	1/4W	
R848	1-215-429-00	METAL	2.2K	1%	1/4W	
R849	1-215-421-00	METAL	1K	1%	1/4W	
R850	1-215-429-00	METAL	2.2K	1%	1/4W	
R851	1-215-404-00	METAL	200	1%	1/4W	
R853	1-215-469-00	METAL	100K	1%	1/4W	
R854	1-249-430-11	CARBON	12K	5%	1/4W	
R855	1-215-469-00	METAL	100K	1%	1/4W	
R856	1-249-430-11	CARBON	12K	5%	1/4W	
R857	1-249-433-11	CARBON	22K	5%	1/4W	
R858	1-249-413-11	CARBON	470	5%	1/4W	
R859	1-249-435-11	CARBON	33K	5%	1/4W	
R860	1-249-441-11	CARBON	100K	5%	1/4W	
R861	1-249-421-11	CARBON	2.2K	5%	1/4W	
R862	1-249-434-11	CARBON	27K	5%	1/4W	
R863	1-249-431-11	CARBON	15K	5%	1/4W	
R864	1-249-428-11	CARBON	8.2K	5%	1/4W	
R865	1-249-440-11	CARBON	82K	5%	1/4W	
R866	1-249-436-11	CARBON	39K	5%	1/4W	
R867	1-249-437-11	CARBON	47K	5%	1/4W	
R868	1-249-428-11	CARBON	8.2K	5%	1/4W	
R869	1-249-429-11	CARBON	10K	5%	1/4W	
R870	1-249-417-11	CARBON	1K	5%	1/4W	
R871	1-249-440-11	CARBON	82K	5%	1/4W	
R872	1-249-423-11	CARBON	3.3K	5%	1/4W	
R873	1-249-441-11	CARBON	100K	5%	1/4W	
R874	1-249-435-11	CARBON	33K	5%	1/4W	
R875	1-249-421-11	CARBON	2.2K	5%	1/4W	
R876	1-215-426-00	METAL	1.6K	1%	1/4W	
R877	1-249-435-11	CARBON	33K	5%	1/4W	
R878	1-249-441-11	CARBON	100K	5%	1/4W	
R879	1-216-489-11	METAL OXIDE	27K	5%	3W	F
R880	1-249-429-11	CARBON	10K	5%	1/4W	
R881	1-214-761-00	METAL	22K	1%	1/4W	
R882	1-249-433-11	CARBON	22K	5%	1/4W	
R883	1-249-417-11	CARBON	1K	5%	1/4W	
R884	1-215-894-11	METAL OXIDE	2.2K	5%	2W	F
R885	1-249-438-11	CARBON	56K	5%	1/4W	
R886	1-249-414-11	CARBON	560	5%	1/4W	
R887	1-215-397-00	METAL	100	1%	1/4W	
R888	1-249-410-11	CARBON	270	5%	1/4W	
R889	1-249-417-11	CARBON	1K	5%	1/4W	

N ZR ZG ZB P

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R890	1-249-431-11	CARBON	15K	5%	1/4W	
R891	1-216-489-11	METAL OXIDE	27K	5%	3W	F
R892	1-249-417-11	CARBON	1K	5%	1/4W	F
R893	1-215-453-00	METAL	22K	1%	1/4W	
R894	1-249-401-11	CARBON	47	5%	1/4W	
R895	1-202-731-00	SOLID	10M	20%	1/2W	
R896	1-260-111-11	CARBON	10K	5%	1/2W	
R897	1-247-881-00	CARBON	120K	5%	1/4W	
R898	1-202-730-00	SOLID	8.2M	20%	1/2W	
R899	1-249-429-11	CARBON	10K	5%	1/4W	
R903	1-202-541-31	SOLID	47	5%	1/2W	
R904	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R910	1-249-425-11	CARBON	4.7K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV901	1-241-631-11	RES, ADJ, CARBON 22K				
RV902	1-241-631-11	RES, ADJ, CARBON 22K				
		<SPARK GAP>				
SG801	1-519-422-11	GAP, SPARK				
		<TRANSFORMER>				
T801	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE				
T802	1-437-090-00	HDT				
T803 ⚠	1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)				

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	*1-644-717-11	ZR BOARD ********			
	*4-341-752-01	EYELET (EY1,EY2)			
		<CAPACITOR>			
C1901	1-162-115-00	CERAMIC	330PF	10%	2KV
C1902	1-162-115-00	CERAMIC	330PF	10%	2KV
		<RESISTOR>			
R1901	1-202-822-00	SOLID	2.2K	20%	1/2W
R1902	1-202-822-00	SOLID	2.2K	20%	1/2W
R1903	1-249-414-11	CARBON	560	5%	1/4W
R1904	1-249-414-11	CARBON	560	5%	1/4W
		<CONNECTOR>			
ZR1	*1-564-522-11	PLUG, CONNECTOR 7P			
ZR2	*1-564-518-11	PLUG, CONNECTOR 3P			
ZR18	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P			

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	*1-644-718-11	ZG BOARD ********			
	*4-341-752-01	EYELET (EY3,EY4)			
		<CAPACITOR>			
C1911	1-162-115-00	CERAMIC	330PF	10%	2KV
C1912	1-162-115-00	CERAMIC	330PF	10%	2KV

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R1911	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1912	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1913	1-249-414-11	CARBON	560	5%	1/4W	
R1914	1-249-414-11	CARBON	560	5%	1/4W	
		<CONNECTOR>				
ZG2	*1-564-523-11	PLUG, CONNECTOR 8P				
ZG19	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P				

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	*1-644-719-11	ZB BOARD ********			
	*4-341-752-01	EYELET (EY5,EY6)			
		<CAPACITOR>			
C1921	1-162-115-00	CERAMIC	330PF	10%	2KV
C1922	1-162-115-00	CERAMIC	330PF	10%	2KV
		<RESISTOR>			
R1921	1-202-822-00	SOLID	2.2K	20%	1/2W
R1922	1-202-822-00	SOLID	2.2K	20%	1/2W
R1923	1-249-414-11	CARBON	560	5%	1/4W
R1924	1-249-414-11	CARBON	560	5%	1/4W
		<CONNECTOR>			
ZB3	*1-564-524-11	PLUG, CONNECTOR 9P			
ZB20	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P			

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	*A-1622-005-A	P BOARD, COMPLETE *****************			
		<CAPACITOR>			
C1401	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1402	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1403	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1404	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C1405	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C1406	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C1407	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1408	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1409	1-124-903-11	ELECT	1MF	20%	50V
C1410	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1412	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1414	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C1416	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C1417	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C1419	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1420	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1421	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1422	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1423	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1424	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1425	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1427	1-126-233-11	ELECT	22MF	20%	50V
C1428	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1429	1-163-113-00	CERAMIC CHIP	68PF	5%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C1430	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1431	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1432	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1433	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1434	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1435	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1436	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1437	1-164-343-11	CERAMIC CHIP	0.056MF	10%	25V
C1438	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1441	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1442	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1443	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1444	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1445	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1446	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1447	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1448	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C1449	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C1450	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1452	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1453	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1454	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1455	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C1456	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C1457	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1461	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1462	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1463	1-126-101-11	ELECT	100MF	20%	16V
C1464	1-126-101-11	ELECT	100MF	20%	16V
C1465	1-126-101-11	ELECT	100MF	20%	16V
C1466	1-126-101-11	ELECT	100MF	20%	16V
C1467	1-126-101-11	ELECT	100MF	20%	16V
C1471	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1472	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1473	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1481	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C1482	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C1491	1-124-907-11	ELECT	10MF	20%	50V
		<CONNECTOR>			
CN1514	*1-568-879-51	PIN, CONNECTOR 4P			
CN1515	*1-564-516-11	PLUG, CONNECTOR 13P			
CN1516	*1-568-879-51	PIN, CONNECTOR 4P			
CN1538	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P			
		<DIODE>			
D1401	8-719-401-41	DIODE MA3051L-TX			
		<FILTER>			
FL1403	1-236-071-11	ENCAPSULATED COMPONENT			
FL1404	1-236-071-11	ENCAPSULATED COMPONENT			
FL1405	1-236-071-11	ENCAPSULATED COMPONENT			
FL1406	1-236-071-11	ENCAPSULATED COMPONENT			
FL1407	1-236-071-11	ENCAPSULATED COMPONENT			
FL1408	1-236-071-11	ENCAPSULATED COMPONENT			
		<IC>			
IC1401	8-759-073-16	IC TDA9160/N2			
IC1402	8-759-156-36	IC TDA4661TS/V2			
IC1403	8-759-055-51	IC SDA9087XGEG			

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC1404	8-759-055-52	IC SDA9089XGEG				
IC1405	8-759-046-27	IC SDA9086-3				
IC1406	8-759-504-21	IC TDA8443A/C4				
IC1410	8-759-037-45	IC MC78L08ACPRP				
IC1411	8-759-081-30	IC MC78L05ACPRP				
		<COIL>				
L1401	1-408-418-00	INDUCTOR	56UH			
L1405	1-408-407-00	INDUCTOR	6.8UH			
L1406	1-408-407-00	INDUCTOR	6.8UH			
		<TRANSISTOR>				
Q1401	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1402	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1403	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1404	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1405	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1406	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1407	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1408	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1409	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1413	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1414	8-729-900-53	TRANSISTOR DTC114EK				
Q1415	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1416	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1417	8-729-900-53	TRANSISTOR DTC114EK				
Q1418	8-729-900-53	TRANSISTOR DTC114EK				
Q1419	8-729-900-53	TRANSISTOR DTC114EK				
Q1421	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1422	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1423	8-729-900-36	TRANSISTOR DTC124ES				
		<RESISTOR>				
JR1401	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR1402	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR1403	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1401	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1402	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1403	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1404	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1405	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1406	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1407	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1408	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1410	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1411	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1412	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1413	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1414	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1415	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1417	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1419	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1421	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1422	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1424	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1425	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1426	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1427	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1429	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1431	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1432	1-216-031-00	METAL GLAZE	180	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1433	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1434	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1435	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1436	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1437	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1438	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1439	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1440	1-249-413-11	CARBON	470	5%	1/4W	
R1441	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1442	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1443	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1444	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1445	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1446	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1449	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1450	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1451	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1453	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1454	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1455	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1456	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1458	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1461	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1462	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1463	1-249-417-11	CARBON	1K	5%	1/4W	
R1471	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1481	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1482	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1483	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1484	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1485	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1486	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1487	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1492	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1493	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1494	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1495	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1496	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1497	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1498	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1499	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

<CRYSTAL>

X1401	1-567-505-11	OSCILLATOR, CRYSTAL
X1402	1-567-504-11	OSCILLATOR, CRYSTAL

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*A-1630-111-A A1 BOARD, COMPLETE
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<FILTER>

BP1101	1-239-047-11	FILTER, BAND PASS
CF1102	1-404-134-00	TRAP, CERAMIC (5.5MHZ)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1101	1-126-101-11	ELECT	100MF	20%	16V	
C1102	1-126-101-11	ELECT	100MF	20%	16V	
C1103	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1104	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V	
C1105	1-163-081-00	CERAMIC CHIP	0.22MF		25V	
C1106	1-163-437-91	CERAMIC CHIP	180PF	5%	50V	
C1107	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1108	1-163-059-00	CERAMIC CHIP	0.01MF		50V	
C1109	1-163-033-00	CERAMIC CHIP	0.022MF		50V	
C1110	1-164-336-11	CERAMIC CHIP	0.33MF		25V	
C1111	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1112	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C1113	1-124-477-11	ELECT	47MF	20%	16V	
C1114	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1115	1-124-477-11	ELECT	47MF	20%	16V	
C1116	1-106-228-00	MYLAR	0.22MF	10%	100V	
C1117	1-163-081-00	CERAMIC CHIP	0.22MF		25V	
C1118	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C1119	1-163-193-00	CERAMIC CHIP	330PF	5%	50V	
C1120	1-163-193-00	CERAMIC CHIP	330PF	5%	50V	
C1121	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C1122	1-163-081-00	CERAMIC CHIP	0.22MF		25V	
C1123	1-106-228-00	MYLAR	0.22MF	10%	100V	
C1124	1-124-477-11	ELECT	47MF	20%	16V	
C1125	1-124-477-11	ELECT	47MF	20%	16V	
C1126	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V	
C1127	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1128	1-124-477-11	ELECT	47MF	20%	16V	
C1129	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1130	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V	
C1131	1-163-059-00	CERAMIC CHIP	0.01MF		50V	
C1132	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1133	1-124-907-11	ELECT	10MF	20%	50V	
C1134	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1135	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1136	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1137	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1138	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	
C1139	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	
C1140	1-163-181-00	CERAMIC CHIP	100PF	5%	50V	
C1141	1-163-205-00	CERAMIC CHIP	0.001MF	5%	50V	
C1142	1-163-019-00	CERAMIC CHIP	0.0068MF		50V	
C1143	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	
C1144	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C1145	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C1146	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1147	1-124-477-11	ELECT	47MF	20%	16V	
C1148	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C1149	1-124-477-11	ELECT	47MF	20%	16V	
C1150	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1151	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1152	1-124-477-11	ELECT	47MF	20%	16V	
C1153	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V	
C1154	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C1155	1-124-477-11	ELECT	47MF	20%	16V	
C1156	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1157	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1158	1-163-038-00	CERAMIC CHIP	0.1MF		25V	

<CONNECTOR>

CN0201	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P

<DIODE>

D1101	8-719-104-34	DIODE 1S2836
D1102	8-719-027-70	DIODE 1SV217-TPH3
D1103	8-719-820-71	DIODE 1SV214

<FERRITE BEAD>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB1101	1-410-396-41	FERRITE BEAD INDUCTOR	
FB1102	1-410-396-41	FERRITE BEAD INDUCTOR	
FB1103	1-410-396-41	FERRITE BEAD INDUCTOR	
FB1104	1-410-396-41	FERRITE BEAD INDUCTOR	
FB1105	1-410-396-41	FERRITE BEAD INDUCTOR	
FB1107	1-410-396-41	FERRITE BEAD INDUCTOR	

<IC>

IC1101	8-759-511-88	IC TDA8732
IC1102	8-759-073-17	IC SAA7282P

<COIL>

L1101	1-408-405-00	INDUCTOR	4.7UH
L1102	1-408-405-00	INDUCTOR	4.7UH
L1103	1-410-119-11	INDUCTOR	1MMH
L1104	1-410-119-11	INDUCTOR	1MMH

<TRANSISTOR>

Q1101	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1102	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1103	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1104	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1105	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1106	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1107	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1108	8-729-120-28	TRANSISTOR 2SC1623-L5L6

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR1101	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR1102	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR1103	1-216-296-00	METAL GLAZE	0	5%	1/8W	
JR1104	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1101	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R1102	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1103	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R1104	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1105	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R1106	1-216-036-00	METAL GLAZE	300	5%	1/10W	
R1107	1-216-042-00	METAL GLAZE	510	5%	1/10W	
R1108	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1109	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R1110	1-216-196-00	METAL GLAZE	820	5%	1/8W	
R1111	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1112	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1113	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1114	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1115	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R1116	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R1117	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1118	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1119	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1120	1-216-232-00	METAL GLAZE	27K	5%	1/8W	
R1121	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1122	1-216-158-00	METAL GLAZE	22	5%	1/8W	
R1123	1-216-158-00	METAL GLAZE	22	5%	1/8W	
R1124	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1125	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1126	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W	
R1127	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1128	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1129	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1130	1-216-246-00	METAL GLAZE	100K	5%	1/8W	
R1131	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W	
R1132	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1133	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1134	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W	
R1135	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1136	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1137	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1138	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1139	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R1140	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1141	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1142	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1143	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1144	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1145	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1146	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1147	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1148	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1149	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1150	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1151	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1152	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1153	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1154	1-216-041-00	METAL GLAZE	470	5%	1/10W	

<CRYSTAL>

X1101	1-579-689-21	VIBRATOR, CRYSTAL
X1102	1-579-282-21	VIBRATOR, CRYSTAL

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*A-1635-001-A M BOARD, COMPLETE
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<CAPACITOR>

C001	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C003	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C007	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C008	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C010	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C011	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C012	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C014	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C016	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C018	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C019	1-126-233-11	ELECT	22MF	20%	50V
C032	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C035	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C036	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C037	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C501	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V
C502	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C503	1-137-367-91	FILM	0.0033MF	5%	50V
C504	1-110-330-81	MYLAR	0.56MF	10%	63V
C505	1-124-925-11	ELECT	2.2MF	20%	50V
C506	1-162-568-11	CERAMIC CHIP	0.33MF	10%	16V
C507	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C508	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C509	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C510	1-124-925-11	ELECT	2.2MF	20%	50V
C511	1-106-375-12	MYLAR	0.022MF	10%	250V
C512	1-126-103-11	ELECT	470MF	20%	16V
C513	1-163-209-00	CERAMIC CHIP	0.0015MF	5%	50V
C514	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C519	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C522	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C523	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C531	1-164-493-11	CERAMIC CHIP	0.047MF	10%	50V
C532	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C538	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C541	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C542	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C543	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C544	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C546	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C547	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V
C549	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C550	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C552	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C559	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C560	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C562	1-216-295-00	METAL GLAZE	0	5%	1/10W
C563	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C564	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C565	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C566	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C567	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C568	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C569	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C570	1-162-568-11	CERAMIC CHIP	0.33MF	10%	16V
		<FILTER>			
CD001	1-577-364-11	VIBRATOR, CERAMIC			
		<CONNECTOR>			
CN1406	*1-568-880-61	PIN, CONNECTOR 5P			
CN1413	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P			
CN1426	*1-568-881-51	PIN, CONNECTOR 6P			
CN1432	*1-568-882-51	PIN, CONNECTOR 7P			
CN1441	*1-564-511-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D001	8-719-027-82	DIODE MA3039H-TX			
D501	8-719-800-76	DIODE 1SS226			
D503	8-719-401-31	DIODE MA3047L-TX			
D504	8-719-400-18	DIODE MA152WK			
D510	8-719-105-91	DIODE RD5.6M-B2			
		<IC>			
IC001	8-759-072-93	IC SDA30C162			
	*1-540-123-11	SOCKET, IC 68P; IC001			
IC003	8-759-160-87	IC M27C512-20B1-AE27			
IC501	8-759-513-48	IC TDA2595/V9			
IC561	8-752-347-92	IC CXD2018Q			
IC562	8-759-998-98	IC LM358D			
IC563	8-759-081-30	IC MC78L05ACPRP			
		<COIL>			
L001	1-408-421-00	INDUCTOR	100UH		
L501	1-410-119-11	INDUCTOR	1MMH		
L561	1-408-409-00	INDUCTOR	10UH		
L562	1-408-409-00	INDUCTOR	10UH		
L563	1-408-947-00	INDUCTOR	2.2MMH		
		<TRANSISTOR>			
Q002	8-729-216-22	TRANSISTOR 2SA1162-G			
Q003	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q501	8-729-901-01	TRANSISTOR DTC144EK			
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q503	8-729-901-01	TRANSISTOR DTC144EK			
Q508	8-729-901-01	TRANSISTOR DTC144EK			
Q509	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q564	8-729-216-22	TRANSISTOR 2SA1162-G			
Q565	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q566	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q567	8-729-901-01	TRANSISTOR DTC144EK			
		<RESISTOR>			
JR002	1-216-295-00	METAL GLAZE	0	5%	1/10W
R001	1-216-025-00	METAL GLAZE	100	5%	1/10W
R002	1-216-025-00	METAL GLAZE	100	5%	1/10W
R003	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R006	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R007	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R008	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R010	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R011	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R012	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R014	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R015	1-216-296-00	METAL GLAZE	0	5%	1/8W
R016	1-216-045-00	METAL GLAZE	680	5%	1/10W
R017	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R018	1-216-041-00	METAL GLAZE	470	5%	1/10W
R020	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R021	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R025	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R026	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R028	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R030	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R032	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R033	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R034	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R035	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R038	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R049	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R050	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R051	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R052	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R053	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R054	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R055	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R067	1-216-043-00	METAL GLAZE	560	5%	1/10W
R068	1-216-043-00	METAL GLAZE	560	5%	1/10W
R069	1-216-037-00	METAL GLAZE	330	5%	1/10W
R070	1-216-037-00	METAL GLAZE	330	5%	1/10W
R501	1-216-047-00	METAL GLAZE	820	5%	1/10W
R502	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R503	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R504	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W

M **V**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R505	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R506	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R507	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R509	1-216-039-00	METAL GLAZE	390	5%	1/10W
R510	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R511	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R512	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R513	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R514	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R515	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R516	1-216-039-00	METAL GLAZE	390	5%	1/10W
R517	1-216-039-00	METAL GLAZE	390	5%	1/10W
R518	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R519	1-216-033-00	METAL GLAZE	220	5%	1/10W
R520	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R521	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R522	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R523	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R524	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R525	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R526	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R527	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R528	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R529	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R531	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R532	1-249-427-11	METAL	6.8K	5%	1/4W
R533	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R535	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R536	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R538	1-216-025-00	METAL GLAZE	100	5%	1/10W
R539	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R540	1-216-295-00	METAL GLAZE	0	5%	1/10W
R541	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R542	1-216-025-00	METAL GLAZE	100	5%	1/10W
R544	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R545	1-216-033-00	METAL GLAZE	220	5%	1/10W
R546	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R547	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R551	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R552	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R553	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R559	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R560	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R564	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R565	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R566	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R567	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R568	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R570	1-216-049-00	METAL GLAZE	1K	5%	1/10W
		<VARIABLE RESISTOR>			
RV506	1-241-766-21	RES, ADJ, CERMET 47K			

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*A-1645-024-A V BOARD, COMPLETE
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REF.NO.	PART NO.	DESCRIPTION			REMARK
		<CAPACITOR>			
C01	1-126-233-11	ELECT	22MF	20%	50V
C02	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C03	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C04	1-126-233-11	ELECT	22MF	20%	50V
C05	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C06	1-124-120-11	ELECT	220MF	20%	16V
C07	1-124-903-11	ELECT	1MF	20%	50V
C08	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C09	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C10	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C11	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C12	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C13	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C14	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C15	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C16	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C17	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C18	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C19	1-163-089-00	CERAMIC CHIP	6PF	0.25PF	50V
C20	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C21	1-163-833-00	CERAMIC CHIP	0.068MF		25V
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C23	1-163-210-00	CERAMIC CHIP	0.0016MF	5%	50V
C24	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C25	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C26	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C28	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C30	1-136-171-00	FILM	0.33MF	5%	50V
C32	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C33	1-124-910-11	ELECT	47MF	20%	50V
C34	1-124-907-11	ELECT	10MF	20%	50V
C35	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C36	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C37	1-216-295-00	METAL GLAZE	0	5%	1/10W
C39	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C40	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C53	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C54	1-163-038-00	CERAMIC CHIP	0.1MF		25V
		<CONNECTOR>			
CN1737	*1-564-511-11	PLUG, CONNECTOR 8P			
CN1741	*1-564-511-11	PLUG, CONNECTOR 8P			
		<TRIMMER>			
CT01	1-141-418-11	CAP, ADJ			
		<DIODE>			
D01	8-719-400-18	DIODE MA152WK			
D03	8-719-104-34	DIODE 1S2836			
D04	8-719-104-34	DIODE 1S2836			
D09	8-719-400-18	DIODE MA152WK			
D10	8-719-400-18	DIODE MA152WK			
D11	8-719-400-18	DIODE MA152WK			
D12	8-719-400-18	DIODE MA152WK			
		<IC>			
IC01	8-759-073-28	IC SDA5248C1			
IC02	8-759-037-64	IC SDA5231-2			
IC03	8-759-146-48	IC UPD424256C-80			
IC04	8-752-353-39	IC CXD1050A-15P			
IC05	8-759-987-16	IC LM393P			

V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L01	1-408-411-00	INDUCTOR 15UH	
L02	1-408-414-00	INDUCTOR 27UH	
L03	1-408-417-00	INDUCTOR 47UH	
L04	1-408-413-00	INDUCTOR 22UH	
L05	1-408-409-00	INDUCTOR 10UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q01	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q03	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q04	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q06	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q07	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q08	8-729-216-22	TRANSISTOR 2SA1162-G	
Q09	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q10	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q12	8-729-901-00	TRANSISTOR DTC124EK	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR02	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R01	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R02	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R03	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R04	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R05	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R06	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R07	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R08	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R09	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R10	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R11	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R12	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R13	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R15	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R16	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R17	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R20	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R21	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R22	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R23	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R24	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R25	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R26	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R27	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R28	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R29	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R30	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R31	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R32	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R33	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R34	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R35	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R36	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R37	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R38	1-218-773-11	METAL CHIP 750K 0.50% 1/10W	
R39	1-216-103-00	METAL CHIP 180K 0.50% 1/10W	
R40	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R41	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R42	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R43	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R44	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R46	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R47	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R48	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R49	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R50	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R54	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R55	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
X02	1-567-495-11	OSCILLATOR, CRYSTAL	

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MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)	
	⚠1-451-396-21	DEFLECTION YOKE (Y936PA)	
	⚠1-452-443-13	NECK ASSY, PICTURE TUBE(NA367)	
	⚠1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
	1-504-145-11	SPEAKER (12CM)	
	1-574-590-31	LEAD ASSY, HIGH-VOLTAGE	
	⚠1-590-501-11	CORD, POWER (WITH NOISE FILTER)	
	⚠8-736-631-05	PICTURE TUBE (SD-249 (G))	
	⚠8-736-632-05	PICTURE TUBE (SD-249 (B))	
	⚠8-736-633-05	PICTURE TUBE (SD-249 (R))	

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ACCESSORIES AND PACKING MATERIALS

REF.NO.	PART NO.	DESCRIPTION	REMARK
	3-755-820-11	MANUAL, INSTRUCTION	
	3-755-820-41	MANUAL, INSTRUCTION	
	*4-030-895-01	JOINT	
	*4-037-938-01	INDIVIDUAL CARTON	
	*4-037-939-01	TRAY	
	*4-037-940-01	PLATE, TOP	
	*4-037-941-01	PLATE, BOTTOM	
	*4-037-942-01	CUSHION (UPPER) (ASSY)	
	*4-037-943-01	CUSHION (LOWER) (ASSY)	
	*4-388-954-01	BAG, PROTECTION	

REMOTE COMMANDER

REF.NO.	PART NO.	DESCRIPTION	REMARK
	1-466-804-11	REMOTE COMMANDER (RM-832)	
	9-903-466-01	POCKET, COVER (FOR RM-832)	